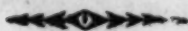

A
CURSORY VIEW
OF THE
TREATMENT OF ULCERS,



Price Three Shillings and Sixpence in Boards.

A



A
CURSORY
VIEW OF THE TREATMENT
OF
ULCERS,

MORE ESPECIALLY THOSE OF THE
Scrofulous, Phagedænic, & Cancerous

DESCRIPTION,

WITH AN

APPENDIX,

ON

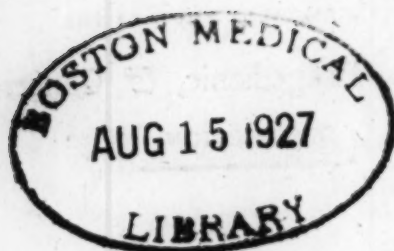
BAYNTON'S NEW MODE OF TREATING

Old Ulcers of the Leg.

BY RICHARD NAYLER,
SURGEON TO THE GLOCESTER INFIRMARY.

—♦—
GLOCESTER,
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—♦—
1800.



1. MR. 428.

TO

Richard Browne Cheston, M.D. F.R.S.

PHYSICIAN TO THE GLOUCESTER INFIRMARY.

DEAR SIR,

I OWE so much to your friendship and patronage, that it would be unpardonable, were I to omit the opportunity which the publication of the following sheets affords me, of offering you this humble though sincere tribute of my respect and gratitude.

Educated under your eye, and indebted, for whatever share of professional consideration I may enjoy, to an assiduous endeavour to form myself on so great a model, I indulge a hope that you will consider the prefixing of your name to these

Remarks as no degradation, however imperfect you may think my efforts to throw some farther light on a subject which so few are qualified by a sufficient share of experience to investigate, and on a material branch of which, your extraordinary abilities have, heretofore, been no less appropriately than beneficially exercised.

That you may long continue to give lustre to the Medical Profession, and to benefit mankind by your active services therein, is the ardent wish of,

DEAR SIR,

YOUR FAITHFUL FRIEND,

AND OBLIGED HUMBLE SERVANT,

THE AUTHOR.


Gloucester, December 16, 1799.

ADVERTISEMENT.

A DESIRE of correcting minute errors in the treatment of Ulcers, and of drawing the attention of medical men to the consideration of facts of much relative importance to the subject, is the only motive for the following observations, which pretend less to enlarge the boundaries of Chirurgical knowledge than to furnish the young practitioner with useful reflections.

Where, as unhappily is the case in the treatment of Ulcers, no *uniform theory* can direct us in our endeavours, every hint must have its value; and the knowledge of *what is to be preferred, and what is to be avoided*, must consequently become an object of no small importance.

If the author has attempted this in a way that is imperfect or inadequate, or has become obscure where he intended only to be brief, he must plead in excuse, his frequent and unavoidable professional interruptions. Whether this plea be admissible or not, and whether the defective and loose state in which his ideas have been thrown together, may meet



with the indulgence he is sensible they require, will depend on the great degree of candour and liberality which those who may honor him with a perusal may be disposed to exercise.—Prompted merely by a wish of becoming useful to those who may not have had opportunities equal with himself of ascertaining in what manner the cure of Ulcers may be best effected, he cannot but hope, that even the most fastidious reader will on this ground at least approve of his intention.

ERRATA.

In Page 24, line 16, for movement, read moment.

52, — 6, for manifest, read manifest.

84, — 7, for prostrate, read prostate.

86, — 8, for lpraph, read lymph.

111, — 19, for excedens, read exedens.

122, — 20, for innoxious, read noxious.

147, — 1, for belledonna, read belladonna.

152, — last, for nosscumii, read nosocómii.

153, — 8, for ammonicale, read ammoniacale.

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PRACTICAL REMARKS,

Éc. Éc.

PART I.

*Of those Ulcers, which may exist independent of
any affection of the system.*

PRELIMINARY OBSERVATIONS.

NOTWITHSTANDING the ingenuity with which the subject of the following pages has been treated by various authors, it is one which is so beset with difficulties, and liable to so much incertitude, that few practitioners are disposed to acknowledge themselves indebted to anything but experience even for the imperfect degree of success with which they are enabled to treat the different species of ulcers at present. This being the case, it is not to be supposed,

that they entertain any very decided veneration for systems and theories, however nice in point of arrangement, or admirable in their adaptation to symptoms and appearances. A more welcome, and, I trust, a more useful task, at least, to the young practitioner, will be that of communicating, with little attention to order or hypothesis, what facts and observation have taught me, in a situation where the opportunities of remark have been abundant, and where the impediments to a regular treatment have been of course less frequent than usually occur in private practice.

It is, perhaps, a sufficient definition of an ulcer, to say, that it is *a solution of continuity in any of the soft parts of the body, accompanied with loss of substance, and a discharge of ill-conditioned pus, ichor, sanies, sordes, or any kind of vitiated fluid.*

Of the division of ulcers, as suggested by modern writers, there is none more worthy of our adoption than that very general one of *local* and *constitutional*; the former existing merely in consequence of some external exciting cause being continued, and counteracting the efforts of nature to remedy the evil; the latter arising from,

or at least, being prolonged by, some constitutional affection. A common wound, degenerated from its original simple, healthy state, into an habitual, complicated, morbid one, furnishes an example of the former kind; and that species of ulcer, called scrofulous, which arises spontaneously, and is curable only by remedies that act on the system, may be cited as an instance of the latter.

The local ulcer, existing on any other part of the body except the legs, is far from being unmanageable, or difficult of cure. It, in fact, requires nothing but a daily renewal of some kind of simple dressing, less with the positive intention of promoting the restoration of the part, than with the negative one of preventing any impediment to the salutary operations of nature. But the ulcer of the lower extremity, is the formidable disease with which we have to contend. It is this which is, perhaps, the most frequent of any surgical complaint, which too often baffles the exercise of our art, and which, when cured, very commonly returns; inasmuch, that the ulcer of the leg may, without any great violation of propriety, be considered as a disease *sui generis*.

It has employed the conjectures of many ingenious men, to assign causes for the frequency, as well as the obstinacy, of this complaint.—Many may, undoubtedly, concur, some too which are unknown; for of causes we know little.

Mr. Underwood attempts to solve the difficulty, by calling our attention, first, to the natural languid state of the circulation in parts situated at such a distance from the heart; by which, the vital energy in them being diminished, the healing powers that depend upon it, must also, of consequence, be weakened. Secondly, he considers as a material impediment to the success of our treatment, the natural structure of the parts, which consist much of tendinous and ligamentous substances, possessing a small share of irritability, and not easily excited to that degree of healthy action which the case requires.

But it has been asserted by some, and implicitly believed by many, that, admitting it were more practicable than it really is, to heal an old ulcer of the leg, the practice is *not a safe one*.—Let us stop here to consider this opinion.

It is undoubtedly true, in point of fact, that persons, who have for many years laboured under this disease, and especially at an advanced period of life, have suffered considerable inconvenience from the healing of an ulcer. We are forbidden by modern theory to suppose, that the ulcer, in the time of its existence, *drained* the constitution of something that had a morbid tendency, and required an outlet: yet, that must either have been the case, or we must admit, that the solids underwent a peculiar and *salutary action* whilst the ulcer existed, which the constitution would not consent to be deprived of. However this be, certain it is, that when a large and long existing ulcer has been brought nearly to the point of healing, or become actually healed, it is not very uncommon for the patient to be attacked with febrile symptoms, or with some affection of the stomach or bowels, during the existence of which, the ulcer has shewn a disposition to enlarge. Some old persons have even, it is said, become paralytic under the like circumstances.

Experience, however, has shewn, that whether these mischievous effects arise or not after the healing of an old ulcer, they arise, at least, in very few instances; so few, indeed, as by no

means to impugn what is now a pretty general practice, *to heal the ulcer whenever it is possible, without attending to what may be the consequence**.

But, indeed, whenever these inconveniencies do occur, they are, in most instances, capable of being done away by venesection, by the administration of emetics, saline or drastic purgatives, or the bark; or, in some cases, by a blister applied to a distant part.

On the first occurrence of unfavourable symptoms, or before they have taken place, the common, and certainly a good preventative remedy, is the opening an issue, on the inside, and immediately below, the knee of the diseased extremity. This, in a great measure, supplies a substitute for that sort of *action, or that sort of drain*, to which the patient's constitution has been familiar, and the ulcer, in many instances, will remain permanently healed.

Whilst we are on this subject, it may not be improper to mention an instance, adduced by a

* The late Mr. Justamond, an eminent lecturer and practitioner in London, has declared, that he never knew the healing of an ulcer fatal, except in *one* instance.

late eminent practitioner, of an ulcer in the leg, caused by the imprudent suppression of an habitual perspiration in the soles of the feet. The ulcer, after having subsisted ten years, was healed by the perspiration of the feet being brought on again; and a relapse was also prevented, by the use of a stocking made of the common silk oil-skin.

That a languid degree of circulation is among the principal causes of the ulcer of the leg is farther confirmed by the well-known fact, —that women, who are more debilitated than men, are more liable than the latter to this troublesome disease. Another proof is, the frequency of the disease in the lower class of people, who, from the scantiness of their food, are not sufficiently nourished. On their coming into an hospital, where they enjoy a better and more nourishing diet, it is remarkable, how soon an advantageous change takes place in the ulcer, which heals, and would perhaps remain cured, but that, on returning once more to their usual way of living, they become subject to a renewal of the complaint.

In treating on ulcerated legs, most writers require an attention to the following circumstances:—1st, absolute rest, and an horizontal position of the limb; 2dly, the proper choice of internal remedies; 3dly, the application of a bandage; 4thly, the proper choice of topics to the ulcer. Of these we shall now proceed to speak nearly in the order in which they stand.

§ 1. *Of rest, and the necessity of an horizontal position of the leg.*

WHEN an ulcer is formed on the leg, and the part is in an irritable and inflamed state, it is very natural to suppose, that motion must tend greatly to augment the mischief; and that it actually does so, we have repeated and melancholy proofs, amongst the labouring poor, who cannot possibly find those opportunities of remaining at rest that their unfortunate cases require. This it is, joined to the causes of debility already enumerated, and we may add, the too prevalent use of spirituous liquors, that occasions the most inconsiderable loss of skin, perhaps, to degenerate into an ulcer of the most formidable kind.

If such then be the effects of exercise on an ulcer, it would seem, *a priori*, that rest must be indispensably necessary in attempting its cure.— But some writers, nevertheless, have advanced a contrary opinion, and one in particular*, not only denies the necessity of absolute rest, and an hori-

* See Underwood on Ulcers.

zontal position of the leg, but even attributes the frequent return of ulcers to the practice of curing them under those circumstances. The great substitute for rest, and an horizontal posture, is a bandage of thin flannel, so applied as to produce an uniform degree of pressure from the ankle upwards to the knee. This, by embracing the debilitated parts, contributes to benefit the ulcer not less than the relative confinement of the muscles of the limb, which the patient uses more like an artificial leg than a real one, since the whole moves forward together in walking, whilst the muscles, with regard to *each other*, are nearly quiescent. The injurious tendency of an upright posture, being also obviated by the use of a bandage, may be accounted for upon a principle by no means irreconcilable to that from which the practice openly professes to deviate. For what is the effect of an horizontal position of the limb but that of taking off the perpendicular pressure of the blood upon the weakened vessels? What is the effect of an elastic roller covering the whole leg, but that of sustaining the vessels, and enabling them, without injury, to support that pressure? In the former case, we hinder the pressure, in the other, we apply a resisting body, which enables the parts to bear it.

To the advantages of the latter system may be added, the general benefit which the constitution must derive from exercise, the want of which, in the other case, disposes the patient to general, and therefore to a certain degree of local, debility, prejudicial to the end we have in view. The circulation is also said to be invigorated in the limb, and the process of restoration forwarded, by the use of a bandage; but this subject we shall discuss in another place.

§ 2. *Of Internal Remedies.*

IN the treatment of ulcers that are merely *local*, it is not to be supposed, that the use of internal remedies can be very strongly indicated.— Yet, in cases where not only local, but general debility, prevail, a very salutary degree of vigour may be imparted to the constitution, by the exhibition of bark, and other tonic remedies. To the Peruvian bark, indeed, some have attributed good effects, independent of its bracing quality; and have expected from its use, a sort of specific operation in amending the discharge of an ulcer, and lessening its irritability. But, the best attested cases do not seem to prove, that any thing

beyond the virtues of a tonic, can justly be attributed to the bark.

It is now a considerable time since practitioners have proved, by very full and repeated trials, the total inefficacy of some other internal remedies, which it was the fashion of the day to extol. Among these particularly was nitre; pushed, as it were, into vogue by bold assertions in its behalf, and supported in its pretensions to infallibility by the apparently *secondary* aid of a bandage, which, no doubt, had an honest and exclusive claim to the meritorious character attempted, for obvious reasons, to be attached to its companion.

Little more than this can be said in favour of an internal remedy, ushered into practice with still greater formality than the preceding, and with favourable attestations even from men of high reputation in the profession, to wit, hemlock. Whatever we may be inclined to grant to this remedy, when employed in the treatment of ulcers manifestly depending on a particular state of the constitution, we can, by no means, allow it any importance in the treatment of an ulcer merely local in its nature. It may, indeed, by lessening the irritability of the whole system,

ameliorate the state of the ulcer in that single particular; yet, even that effect must be trivial when obtained by so circuitous a channel, and may be more advantageously attempted in the way of a topic, in which, indeed, it is entitled to some share of approbation, as we shall have occasion to mention hereafter.

It is almost superfluous to dwell on this subject, since, certainly, we are possessed of few, if any, internal remedies, that are efficacious in the kind of ulcer of which we are now treating. Yet, if facts, not reconcileable to any existing theory, possess any value, we may venture to mention the internal use of the *hydrargyrus muriatus*, a remedy which, in some instances, has certainly been of service, and especially when administered at the same time with the Peruvian bark.

There is another internal remedy, indeed, which applies to those ulcers common in the legs of women, whose menstrual evacuations have been suspended; and that is iron. This, it must be confessed, is not merely useful, but indispensably necessary; as tending to remove the apparent cause of the ulcer, which, in general, cannot be cured till the menstrual evacuations are re-

stored. In the view of counteracting general debility too, this remedy is at least equal to any other tonic. The vitriolated iron is, perhaps, the most eligible preparation of that metal, and it may be very properly administered, at the same time, with the bark.

The last class of internal remedies, of which it is necessary to speak, is the cathartic. In rural situations, where surgeons often have to do with vigorous subjects, prone to inflammation, the necessity of evacuating the intestines occasionally, is clearly indicated. Hence, when the state of the patient's general habit, and of the ulcer, is opposite to that of debility, it is an advantageous practice, to administer occasional doses of neutral salts. But many of such cases are more effectually relieved by *keeping* the bowels in a lax state, by daily doses of a solution of salts, to each dose of which, a quarter, or one-sixth of a grain of tartrized antimony, is joined.

It must not, however, be supposed, that, because the use of cathartic remedies is occasionally beneficial, that their administration is to be encouraged as an indiscriminate practice. Experience certainly proves the contrary; and even,

that in many instances, they are hurtful, by inducing both general and local debility.

While on the subject of internal remedies, there can be no impropriety in our adding a few observations on the subject also of diet, which many suppose should be considered as one of the class. As errors in diet, more particularly the inordinate use of spirituous liquors are justly ranked by many amongst the causes of ulcerated legs, or, at least, among the most material impediments to their cure, it is very natural to suppose, that some strict regulation in the choice of our food, must be of importance where an ulcer is to be treated*. Much, however, as this may seem conformable to probability, it is certainly, by no means, agreeable to experience; for the most minute attention, in avoiding what has been thought pernicious, has, in no instance on record, produced such effects, as to render the diet of patients with ulcerated legs, an object of consideration, farther than the preserving it within the line of strict temperance.

* No rule is without its exceptions. My friend, Dr. Cheston, informs me of the case of a woman, once under his care, at the Infirmary, whose ulcers could not be brought into a healing state till some stimulus was applied to her stomach, by way of equivalent for the loss of her dram bottle, to which she had been long devoted.

Where we have to contend with inflammation, indeed, we well know the propriety of using diluents, and avoiding animal food, and stimulants of every description; and where debility prevails, we can decide, with equal facility, on the impropriety of a low regimen:—beyond this our observations degenerate into mere trifling; and we uselessly deprive our patients of many uninjurious gratifications of the appetite by the restraints we impose.

§ 3. *Of the constitutional complaints which sometimes accompany simple ulcers on the legs.*

It sometimes happens, that patients who have ulcerated legs, are at the same time troubled with phthical symptoms, as a cough, night-sweats, and hectic paroxysms.

In these cases, however the state of the ulcer may seem to demand invigorating remedies, and a generous diet, we must be extremely circumspect in our use of stimulants, either in the form of aliment or medicine. Iron, it is probable, will be improper, since the irritability is greatly increased in such patients. So, indeed, will stimuli of almost every description; and even the bark, which is too apt to increase affections

of the chest, will require to be employed with the utmost circumspection.

In a case of this sort, however, we may very properly give gentle emetics, repeated at proper intervals, and followed by warm purgatives.— As the stomach never fails to be a good deal affected, the former are attended with the best consequences; and will, in general, so far remove the cough, as to enable us to administer with safety some weak preparation of the bark, with the vitriolic acid, to abate the night sweats.

Country air is, above all things, material; for it is, in general, the want of a pure atmosphere that so commonly occasions hectic symptoms in patients situated in crowded hospitals and workhouses. In such, where the general health is much impaired, ulcers, however carefully attended to, either remain stationary, or become worse; so necessary is it, to ensure any degree of success in their treatment, that the patient should have, at least, a tolerable share of constitutional energy,

§ 4. Of Topical Remedies in general.

WITH regard to topical applications for common ulcers, it is impossible to lay down any certain rules for the selection of them. The surgeon who imagines he can cure all ulcers by a dressing of one particular kind, or by any particular manner of applying it, will find himself egregiously mistaken.

In treating an ulcer with topical remedies, we should have two intentions in view:—1st. Whatever be the condition in which we find an ulcer, to bring it into such a state as shall dispose it to heal. 2dly. To heal or cicatrize it permanently.

In pursuing the first intention, we shall find ourselves occasionally very much at a loss. In a great many cases, it will be found necessary to destroy the old surface of the ulcer, and to expose a new one; and, it is with this view, that an author, who has professedly written on the subject, and, before him, the excellent Wiseman, have recommended *filling up* the sore with red

nitrate quicksilver*, and repeating this process till a clean and healthy surface is exhibited.

Where the ulcer is of an inconsiderable size, this practice, no doubt, is to be commended; but, in very large ulcers, or such as extend over the greater part of the leg, of which we see many instances, this plan cannot be pursued.

Patients of the poorer class, amongst whom, unhappily, ulcers of the legs are most prevalent, having no leisure to attend to the means necessary for their cure, usually have their sores in a filthy and putrid state. This it is obviously necessary to remedy, by soaking and washing the parts in warm water; by the application of lint once a day, or oftener, according to the quantity of discharge; and by a constant renewal of the cloths and bandages.

* The author alluded to is Mr. Underwood; who certainly has a fair claim to the merit of having revived the favorite practice of Wiseman, in the application of red precipitate to ulcers; and also that of uniform pressure over the whole of the limb. Wiseman, however, preferred a laced stocking to a bandage, and certainly, where the application of pressure is to be made by the patient himself, a laced stocking is more likely to answer the end, because less likely to be put on improperly than a bandage; though, in the hands of a surgeon, the case may, perhaps, be otherwise.

Cleanliness is one among the most important advantages of *fomenting* ulcers; though, in this form, it is certain many topics may be applied in a curative point of view. Where an ulcer is inflamed, we may apply emollients; where it is in an irritable state, we may use sedatives, as a fomentation of poppies; where it is putrid, we may use decoctions which have a tendency to resist putrefaction; and where an ulcer is of the languid description, we can apply stimulants. Warm fomentations have a good effect, not on the ulcer alone, but likewise on the surrounding parts which are softened and relaxed, and the circulation promoted through the thick and callous edges which usually encompass those ulcers that have existed long. But, on the other hand, there are instances where this relaxing effect is disadvantageous, as where the ulcer is disposed to fungate, and its surface appears rather redundant, and of a loose texture. These, it is highly necessary that the surgeon should distinguish; since such will, probably, be more benefited by applying cold water than hot.

Another thing that ought, perhaps, to be regarded, is the degree of heat which is most suitable to the design of a fomentation. Though

this circumstance is not attended to, but the practice too commonly followed is that of applying it as *hot* as the patient can bear, the description of ulcer of which we last spoke, and, no doubt, many others, cannot but be most materially injured by such a kind of application. It is probable too, that the irritable ulcer would be particularly liable to suffer by it, for the degree of heat, acting as a violent stimulant, must, of course, be disadvantageous where every thing stimulating is contra-indicated. It is not necessary to dwell, indeed, on this subject, since the bare mention of it will be sufficient to put the surgeon on his guard, and to induce him to caution those to whose management this part of the treatment of an ulcer belongs, to act only as circumstances require.

By the same rule which directs us in the choice of the materials for a fomentation should we be guided also in directing the ingredients for a *poultice*; which is another very material agent in the treatment of ulcers. Where the intention is that of a simple emollient, a bread and water poultice, with a little linseed meal, is sufficient.—Where irritability is to be diminished, a poultice, prepared with the decoctions of poppies, or of

hemlock, with bread and linseed, is the most eligible.—Where stimulants are wanting, we have the cataplasma cumini, and other similar remedies in abundance; and so on, as the judgment of the surgeon will most naturally dictate*. One thing, however, is to be observed, that these fomentations and poultices, though evidently useful on their first application to ulcers, should not be continued too long. When once the effect of relieving the pain of the ulcer, and cleansing it, is obtained, unless their farther continuance be plainly indicated, they must be left off; for, if continued longer than is requisite, they either bring on debility, or increase it if already existing, and ultimately impede the cure. If, after the use of them, the sore should appear florid, and full of healthy granulations, nothing more will be necessary, perhaps, to complete the cure, than a slight inactive superficial dressing, and the use of a bandage. In the course of the treatment, we need never be anxious to wipe the surface of the sore, particularly if the discharge it yields be of a favorable kind; but care should, nevertheless,

* I do not think it necessary here to point out the particular manner in which fomentations and poultices are to be prepared. For that, it is sufficient to refer the reader to the *Pharmacopœia Chirurgica*, a work which includes every formula of this sort than can be desired.

be taken to keep the healing edges perfectly clean. A white scurf, or crust, usually accumulates round these edges, which is formed of the coagulable lymph of the blood. This, if left to itself, will form layer upon layer, till a callous edge is produced, and immediately under it a hollow kind of ulcer.

To avoid these consequences, we should every day carefully, yet with as little force as possible, scrape off this white matter, either with a spatula, a probe, or some such instrument; being cautious in so doing, not to injure the tender skin which we see advancing over the granulations.

To an ulcer which makes this favourable sort of progress, it is by no means necessary, or proper, to use any topic possessing active properties. Where healthy granulations spontaneously appear, and fill up the cavity of the ulcer, no stimulus can be wanting, or would be proper; and where, after that is accomplished, the skin is seen to advance gradually over the surface, no application can be necessary but a layer of dry lint, shaped nicely to the dimensions of the granulating surface, to absorb the discharge, and an outer dressing of some simple ointment, to prevent its

edges from adhering when a renewal of the dressings becomes necessary.

It may not be amiss to consider, in this place, what are the circumstances which ought to guide us in determining at what particular periods the dressing of an ulcer requires to be repeated. The customs of surgery have, in some degree, decided this point in favour of the repetition of fresh dressings *once* a day, and in some cases *twice*; but scarcely ever has it been the practice to renew them oftener. The greater, or less frequency of the surgeon's visits have, indeed, had some influence in this respect; and the patient not uncommonly consents to suffer some hours of inconvenience rather than take off his dressings at any other movement. That this rule has both its advantages and disadvantages is extremely obvious; but let us enquire how far a general rule may be put in practice, with regard to the renewal of our applications to an ulcer.

There is scarcely any instance, in which an ulcer, however healthily disposed, will not after long remaining undressed become more or less uneasy. The matter discharged, though of a quality the most favorable that can be wished,

will acquire irritating qualities barely from the circumstance of its being pent up. The natural heat of the part disposes it to putrefaction, or some spontaneous chemical change, by which it becomes capable of acting on the ulcer that produced it, greatly, perhaps, to its injury. In such a case, it is likely that every ill consequence would be obviated by renewing our applications at the customary periods; but, where an ulcer is so large as to yield a good deal of pus; or where, whether large or small, its discharges are thin, offensive, and irritating, the inconvenience of retaining the dressings for too many hours together cannot fail of being considerable.

Perhaps there is no surer guide to direct us in these respects, than that obvious one, of the patient's own feelings; at least it is certain, that the operations of nature are not to be calculated by the movements of the clock. An ulcer healthily disposed not only forbids our interference, but universally resents it when prematurely exercised. The patient's feelings cannot in that case be called in question, as a just indication of the time when our applications should be renewed. An uneasy disposition in the part, tells us

what we should do, and till this happens, it is plain we ought to do nothing.

This question, however, applies to every description of ulcer; but there may be some, where the pain is of necessity brought on by the remedies applied, or is an existing, and perhaps, unremitting symptom, connected with the ulcer itself. Under such circumstances, we are warranted in forming a judgment for ourselves as to the proper periods when fresh dressings should be applied. If the patient has an interval of ease, it should, by no means, be interrupted; for there is no assistance which *we* can afford that will compensate for our officiousness at an improper moment.

For the most part, where there is much pain and irritation, there is a proportionate *quantity* of discharge, and where that is the case, the nature of our dressings should either be such as to absorb the fluids as fast as they are formed, or the renewal of fresh dressings must be more frequent.

It is necessary, in fact, that the dressing for an ulcer, particularly a large one, should be *pervious* to the matter discharged from it. For this

reason, there is no outer dressing that can be used more proper than tow; although, in the practice of some surgeons, it may appear, and certainly is, more coarse and inelegant than lint. It has, nevertheless, the advantage of letting out the discharge more readily than the latter, and of suffering it to pass into the cloths which surround the limb, which may be easily renewed when fresh dressing is not adviseable.

Every surgeon must have had occasion to remark the importance of giving the discharge from an ulcer a free passage. Nothing, indeed, is more common, than to see an ulcer converted into a sort of issue, by the practice of confining the discharge; which is commonly done, first, by applying an outward dressing which is impervious, and secondly, by binding this so firmly on, that the matter can have no outlet, but must act upon the sore in the same way as a pea does in an issue; with this difference, indeed, that on every renewal of the dressing, the sore must become larger and larger, whilst, in the other case, it is confined to certain dimensions. Outer dressings of linen rag, spread with any tenacious salve or ointment, are particularly exceptionable in this view; the matter, indeed, which cannot find its way through the pores of the linen, at-

tempts to force itself between the plaister and the skin, but when a bandage is employed at the same time, its escape, even by this means, is prevented; and those consequences take place of which I have just now made mention.

The foregoing circumstances evince that the *manner how* is not less important than the *time when* our medicinal remedies should be applied to ulcers; and what we shall now mention, will be a further confirmation of this. The general treatment of these is, perhaps, in nothing more defective than in respect to the small degree of care and attention employed in adjusting the different applications nicely, and with a mechanical sort of exactness, to the diseased part, without which the best chosen remedies will be found to answer no great purpose. In fact, there may result from an error in this respect, effects positively injurious, since it commonly happens, that different remedies are required to different parts of the same ulcer, and if these are not nicely accommodated to the situations for which they are destined, very essential mischief may be produced.

But if it be of consequence to avoid a slovenly treatment in these respects, still more is it of importance to attend minutely to the mode of ap-

plying the bandage, which, though an admirable remedy in judicious and careful hands, is often the cause of considerable mischief to ulcers.

The pressure applied to the leg, should be extended over the whole of its surface, and should likewise be *equable* in every part. If a bandage be so applied that it shall strongly bind the limb in one part, and not so in another, the consequence must be, that the blood will be unequally distributed over the surface; the circulation being impeded in some parts, whilst in others, it is too much accelerated. Thus, if any single turn of the bandage be drawn tight over the ulcer, the consequence will be pain and irritation; and if the upper turns be all of them tight, whilst the lower ones are slack, the blood will be arrested in the veins as in the use of a ligature in bleeding.

It is to the want of accuracy in applying the necessary remedies to ulcers, together with the insufficient, or perhaps, injurious use of the bandage, that we are to attribute the very little good that is done by furnishing the patient with remedies to use himself. For once that he dresses the part properly, he fails to do it ten times; and the re-

sult is, that the cure does not proceed; nay, it is well if the progress made be not that of *ulceration*.

To these impediments we may likewise add, the repeated, and sometimes rapid, changes which take place in different parts of the same ulcer.—

... These necessarily call for a corresponding change in the applications to be employed, but of course, are not attended to by the patient, who, having nothing to guide him but the general instructions given him by the surgeon, goes on from day to day in the use of one particular plan, which, though perfectly suitable at first, has now become useless at least, if not detrimental.

As the application of dressings, and of the bandage, as far as the *manner* of doing them is concerned, usually falls under the management of gentlemen scarcely yet initiated in surgical business, it is too common to see them hastily, and of course, inadequately, performed; and it is particularly unfortunate, that the hurrying way in which ulcers are dressed in the London hospitals, affords the student so few opportunities of convincing himself, how essential to the cure of an ulcer is a *deliberate, neat, and systematic way of applying the necessary remedies*.

Having thus spoken generally of topical applications for ulcers, we shall now speak of their symptoms.

§ 5. *Of the Symptoms of Ulcers.*

1. IN treating of the symptoms of ulcers, we shall begin with *pain*; as that is, in many cases, one of the most troublesome, both to the patient and the surgeon. Some ulcers are in a state of entire indolence, (and are not attended with any pain), whilst others are sensible in the highest degree.—It is common to attribute this to the greater or less degree of inflammation affecting the ulcer; but there is reason to believe, that this is a mistaken notion, since it is by no means an unusual thing to find the pain of an ulcer relieved by those means which would augment inflammation, as by the use of stimulants, or the application of a very tight bandage. It seems, therefore, rather to arise, in many cases, from a peculiar flabbiness, want of tone, and consequent increase of irritability in the part.

In other instances, although there appears no material degree of inflammation, we find it ex-

tremely difficult to overcome this symptom in an ulcer; and, as there exist no particular appearances to direct us to the cause, we are under the necessity of trying different remedies one after the other, till we hit on that, which, in the language of the patient, *agrees with* the fore.

In the treatment of this symptom in ulcers, besides the usual warm and moist applications, we should seek to afford relief by the topical use of opium. We should mingle it as well in our fomentations as in the dressings applied directly to the ulcer. Sometimes the tincture of opium, brushed over the sore with a camel's hair pencil, is of signal service; notwithstanding its first effect is to stimulate, and give violent pain. The addition of a very small proportion of camphor has, likewise, in many instances, contributed to the object in view; but, in the use of this remedy, it is always to be observed, that its acting as a sedative, or a stimulant, (in both of which characters its powers are very considerable), depends entirely on the proportions being nicely adapted to the sensibility of the part. The *cataplasma natri vitriolati**, a remedy employed for another purpose, by Dr. Kirkland, will sometimes answer

* See Pharm. Chirurg.

this intention, as will sometimes sprinkling the part with a powder of the dried leaves of hemlock, or applying that narcotic vegetable in the different forms of a bath, fomentation, or poultice.

Sometimes, on the other hand, cold applications to the ulcer will succeed best, as the solutions of acetated lead, muriated quicksilver, vitriolated zinc, &c. Brushing the sore with a weak solution of nitrated silver will often remove the pain, by exciting a new action in the part; as will also, on the same principle, a solution of arsenic, in the proportion of one grain to a quart of water, the liquor being filtered before its application is attempted. The solution last mentioned, may also, with great propriety, be applied in the form of a cataplasm. Dressing the wound with ointments, in which the stimulating gums or quicksilver enter as ingredients, have also been attended with advantage: but it would be an endless attempt to enumerate the various remedies, which, on the principle of exciting a *new action* in an ulcer of the painful description, (a principle, on which, in the greater number of cases, relief can alone be afforded), have been in use among practitioners, and employed according to existing circumstances.

2. Another symptom sometimes attending ulcers is a *sinus*, from whence, some surgeons denominate an ulcer in which this appearance takes place, a *sinuous* ulcer. There may exist one or more of these sinuses in the same ulcer, and they may be discovered by pressing the adjacent parts, which will occasion the matter to flow out, so that their extent may afterwards be examined by the introduction of a probe.

We have already observed, that these sinuses are sometimes occasioned by the accumulation of coagulable lymph on the edges of a wound, and that they may be prevented from taking place, by daily scraping off the white matter with the edge of a probe, or any other dull instrument. When the sinus has existed long, or is completely established, the cure must depend on attending to the same rules as are usually observed in treating those sinuses which accompany an abscess.— A compress may be applied if the sinus be such as to admit of being acted upon by such a remedy; otherwise, incision, a seton passed through, or a counter-opening, may be attempted; and one or other of these means will, in general, prove successful.

3. If, by injudicious management, or a long continuance of the complaint, the sinus should have acquired a degree of hardness, it is then degenerated into what we call a *fistula*, and the ulcer then is termed a *fistulous* ulcer. In this case, the most efficacious treatment is, to lay it completely open by an incision; but, if we are rather induced to try the effect of compression, the callosity must first be got the better of, and this is only to be accomplished by injecting stimulating liquids, as tincture of cantharides diluted with water, or a pretty strong solution of muriated quicksilver, &c. Or it may be attempted by introducing a dossil of lint, first greased with some simple unguent, and afterwards rolled in red nitrated quicksilver: or, if a seton be used in this case, that also must be covered with the same, or some other corrosive preparation.

The effect of these applications is to destroy the internal surface of the fistula, or, at least, to excite such a degree of inflammation and suppuration in it, as will encrease the discharge, overcome the hardness, and dispose the surface to throw out healthy granulations of flesh sufficient to fill up, and finally consolidate the cavity.

4. Another symptom, which it is necessary to notice as attendant upon ulcers, is the *callosity of the edges*, from which circumstance, some writers have given these ulcers the name of *callous ulcers*. To guard against this symptom, it is still more important than in the last instance, to remove the coagulable lymph which collects on the edges. But, notwithstanding every effort of this sort, hard edges will sometimes take place in ulcers; and when they do, they oppose a most obstinate resistance to the progress of the cure.

In general, a very effectual way of softening them, is, to rub them with unguentum hydrargyri, prepared of a double strength to that proposed by the College; or, what may answer still better, is the applying it by way of a plegit, over the dressings covering the sore, taking care that it is made to come in close contact with the edges. M. le Dran strenuously advises scarifications to be made all round the ulcer, at certain distances, and penetrating completely through their substance. These, he advises to be made every fourth day, till the wound is brought into a proper state; and he asserts, that, in the course of his practice, this method never failed him.— But, there are few patients who are willing to

submit to this method; and indeed, there is reason to believe, that the destruction of the callous edges, by means of some caustic application repeatedly applied, will answer equally well. — The parts may be well rubbed with nitrated silver every day; or, if that prove insufficient, kali purum may be cautiously applied; or that old-fashioned, yet useful caustic, butyrum antimonii, the liquid form of which renders its application peculiarly commodious in such cases. Some one of these will scarcely fail to counteract this troublesome symptom effectually; whilst proper remedies continue to be applied to the ulcer itself, to dispose it to granulate.

We must not quit this subject, however, without mentioning another expedient which has been used to reduce the callous edges of ulcers. This method is, by applying, in such a way as to *press on the edges only*, a piece of sheet lead, shaped in exact conformity to the figure of the wound, and secured by a bandage. A considerable degree of callosity in the parts may certainly be overcome by this simple method, which, in slight cases, at least, deserves to be had recourse to in preference to more violent expedients.

5. It has been observed by most writers, that that kind of ulcer which is distinguished by callous edges, is also attended with a varicose state of the veins of the whole leg. These varices not only impede the cure, but are likewise apt to occasion a return of the ulcer, and they sometimes burst, and produce a very troublesome, and even dangerous, hemorrhage. The only method of treating them is, to apply a constant and uniform external pressure, either by bandage or a laced stocking, over the whole leg. When they happen to burst, the hemorrhage may be restrained, by applying powerful styptics, as oil of turpentine, &c. to the opening: or it may be necessary, where the bleeding happens in a patient of a very debilitated constitution, to cut down to the vein, and secure it by a ligature, as in the case of an artery.

As the ancient surgeons observed that ulcers of the callous description usually occurred in those legs in which varices were most prevalent, they gave those ulcers the name of *varicose*; and in this they have been imitated by many of the moderns, certainly with some degree of propriety, since such ulcers cannot but have their origin in a diseased state of the veins of the part, however

justly they may afterwards deserve the appellation of *callous*.

6. The next symptom we shall speak of, as attending an ulcer, is *caries*. From this being the state of the bone lying immediately beneath an ulcer, authors have distinguished the latter by the name of the *carious* ulcer. It is seldom, however, that the ulcer, in such a case, is to be considered in any other light than as a secondary affection; and a proof of this is, that its appearance is not, in general, indicative of a want of vigour, but rather that of too great luxuriancy and redundance of granulation; nor does it, in general, fail to get well, whenever the exfoliation of the diseased bone is completely effected.

Many surgeons, however, incline to an opinion, that the ulcer, in this case, is the cause, and not the consequence of the caries, and that, happening to take place on a part where little or no muscular substance intervenes between the bone and the skin, as on the shin bone, the acrid matter finds its way to the periosteum, and thence the caries is established. From every enquiry, however, that I have been able to make with regard to the origin of this complaint, I have found

reason to think differently. The cause of this kind of ulcer has, in most cases, proved to be some violence done to the part; which, whilst it produced the ulcer, laid also the foundation of the caries. In other instances, the bone has evidently been the first affected; and the ulcer produced, has resulted from the formation of matter upon or near to its surface. This, indeed, has not been uniformly the case; but sufficiently so to justify the general supposition I have adopted, that the ulcer denominated carious is the effect of a primary affection of the bone, and is kept up by the irritating process going forward beneath the surface.

But it is of much less consequence to be able to decide on this point, than to possess ourselves of the means of distinguishing, when this species of ulcer is offered to our examination, whether the bone beneath be really carious or not; for, on this circumstance depends the plan of treatment which it may be prudent to adopt, as well as our prospect of finally succeeding in the cure of the ulcer.

On the first view of an ulcer covering a carious bone we are generally struck with the prominent appearance, not only of the ulcer itself,

but of the whole surrounding parts, which are, as it were, lifted up by some solid substance beneath; though, at the same time, we perceive deepnesses, and granular irregularities in some parts of the ulcer itself. These hollow parts are commonly seen filled with the discharge, which is of a blackish purulent appearance, and of a very putrid smell. Between these spaces it is sometimes practicable to pass a probe, the examination with which is often the most satisfactory and decisive test of the existence of a caries of the bone that we can desire. The disease, however, cannot always be ascertained by this means; and we are left to judge, by the concomitant circumstances, whether this really be the fact or not.

Among the appearances which characterise this species of ulcer, not the least equivocal is the peculiarity of colour and loose texture of the new-formed parts. The granulations, instead of wearing a florid and healthy appearance, are dark and approaching to a liver colour; and the healthy edges, if any can be distinguished, have a remarkable blueness.

With regard to the treatment of the carious ulcer, it must evidently depend on the treat-

ment of the caries; and that is a subject not immediately under our notice at present. There is no doubt but, in many instances, the healing of the ulcer has, without this, been accomplished, though the cure has not afterwards proved very lasting.

The skin may, by the use of common remedies, rest, &c. be prevailed on to close the wound; but the irritation arising from the deeper seated mischief will not long suffer it to remain so; nor indeed is it of much advantage to the patient that it should, since the inconvenience produced by the carious bone is not much more considerable with than without the ulcer.

7. We shall now take notice of a symptom attendant on ulcers, which has not been, in general, noticed by writers on this subject. It is peculiar indeed to hospitals, few if any instances occurring of it, as far as I have been able to learn, in the private practice of gentlemen of the profession. It usually happens in those simple ulcers that are the consequence of large operations. When the healing of the sore is nearly completed, the patient, perhaps, will be suddenly attacked with violent pain in the part.

This is succeeded by a phagedænic slough, beginning on the fore, and gradually increasing, till the whole wound, however great its original extent may have been, is again laid open; nay, it is not uncommon for the sloughing to extend to the sound parts, where no wound existed before.

When the first slough has separated it is succeeded by many others, and accompanied with a most abominably fetid discharge; and this interruption to the cure will sometimes occur two or three different times in the same subject; or perhaps the cure cannot be accomplished without removing the patient into a purer atmosphere.

There can be no doubt, from this last circumstance, but that this symptom is chiefly, if not entirely, owing to the unwholesomeness of hospital effluvia. It must nevertheless be considered, that hospitals, those of the metropolis at least, are the receptacles of half-starved and debilitated persons, in whom the disposition to gangrene cannot but be much greater than in persons who enjoy a competent share of good diet, or indulge in the luxuries of the table. It may be alledged indeed, that this symptom is ex-

ceedingly different from gangrene, yet it cannot be denied, that it is putrid in its nature, attended by a low pulse, and relieved by stimulants, opium, and the bark, all remedies peculiarly demanded where a part exhibits a disposition to gangrene.

8. The last symptom on which it is necessary we should remark, is one that is very frequently observed in old sore legs. We find the limb in many of these cases much swelled, and filled with indurated tumors or lumps in one or more parts, which will not always be resolved by the discharge from the ulcer. This symptom is in some instances marked with a peculiar degree of obstinacy, and occurs now and then also in the patient's other leg where no ulcer exists.

Sometimes, in breaking these hardneesses, the application of a strong volatile soapy liniment is of service; as is sometimes electricity, and the inunction of quicksilver ointment well impregnated with camphor. Inclosing the whole leg (where there is no ulcer) in a mercurial plaister is a good remedy, since it acts not only by exciting the absorbent vessels, but also by confining the perspiration. Upon the latter prin-

ciple, the application of oilskin has been recommended by Mr. Underwood, and no doubt deserves a trial. But, notwithstanding the united assistance of these remedies, it is not uncommon to meet with cases in which this symptom cannot be got the better of, but the parts will remain in a state that continually threatens farther injury, and excites uneasy apprehensions in the mind of the patient.

PART II.

*Of Ulcers in the production or existence of which
the constitution participates.*

HITHERTO we have considered an ulcer only as a topical disease, independent of any vice in the system; we shall now speak of those ulcers in which the constitution evidently participates.

The different kinds of virus which occasionally prevail in the system, and which are capable of producing ulcers of a specific character, are five; to wit, the SCORBUTIC, the VENEREAL, the SCROFULOUS, the PHAGEDÆNIC, and, lastly, the CANCEROUS. Of these we shall speak in their order, and somewhat more in detail of the three last, as forming the most interesting part of our subject.

§ 1. *Of the Scorbutic Ulcer.*

ALTHOUGH it scarcely can be expected to happen, that so high a degree of scurvy can take place in persons residing on land as occurs in those who engage in long voyages, we nevertheless meet with many ulcers, which evidently bear the scorbutic character, evincing, if not a confirmed scurvy in the habit, at least a very strong tendency to that complaint.

This kind of ulcer may be very readily distinguished from others of a different description by these peculiar external signs, as well as by the general scorbutic symptoms, which, on enquiry, are generally found to affect the patient. Such are, a particular languid state of the circulation of the blood on the surface of the body, an offensive breath, soft, spongy, and bleeding gums, high coloured and irritating urine, &c.

The ulcer itself is very apt to bleed on being slightly touched; its colour is brownish; its surface of a loose unconnected texture, frequently shooting out fungous granulations, which also bleed on the gentlest force that can be applied to

them. The skin round the ulcer is of a livid, purple, or black hue; and if there be any spots, as there frequently are, these are all of the same complexion. The discharge is usually thin and sanious, and runs from the part in considerable quantity almost immediately after the ulcer is dressed.

It may be objected to by some, perhaps, that we have considered the scorbutic ulcer as one of those which arise from a particular kind of *virus*. It is pretty generally acknowledged, however, that the scurvy is a disease of the fluids, and depends on the existence of some kind of *morbid matter*, affecting the blood's texture and *purity*; and if so, it is a supposition that does no great violence to probability, that these morbid or virulent particles lay the foundation of the scorbutic ulcer.

The scorbutic ulcer is perhaps the only one in which the article of diet is a matter of decisive importance. The cure of the scurvy is well known to depend chiefly, if not entirely, on the use of proper vegetable aliment; at least, this is the case after long sea voyages; and though a scurvy contracted on shore may demand a regi-

men somewhat less strict in this particular than one contracted by the use of salt provisions at sea; yet it is, nevertheless, a point very material to be attended to; for those means which are powerful in correcting the scorbutic taint in the habit, must, of course, be important in the treatment of the ulcer; and the more especially, as it cannot be cured whilst that taint remains. A milk and vegetable diet is, therefore, that from which the best effects are to be expected; not, indeed, to the entire exclusion of animal food, but this should be of easy digestion, great nourishment, and neither salted nor highly seasoned. Salt, indeed, it has been thought absolutely necessary to interdict the use of, as having a principal share in the production of sea scurvy: not, however, that this is a point by any means to be admitted as indisputable, for I am rather inclined to attribute more to the *change* which flesh meat undergoes by *being salted*, than to the operation of salt itself on the human body. The use of fermented, or even of *fermenting* liquors, is also to be adopted, in preference to drinks of any other description, on account of the fixed air with which they abound.

In the topical applications to this sort of ulcer, every kind of unctuous, or greasy sub-

Scorbutic Ulcer.

france, to be avoided. A poultice, prepared with rye meal, and an infusion of malt meal, with addition of a spoonful of yeast, is an excellent application; a considerable quantity of fixed air being extricated, and coming in contact with the ulcer in a short time after its application. A mixture of bark and myrrh, in fine powder, sprinkled or dusted over the surface, is also very beneficial. Poultices of carrots, or of turnips, are likewise good; and likewise the topic recommended by Dr. Lind, consisting of mel *Ægyptiacum* and mel *rosæ*, with a small quantity of vitriolic acid.

With regard to internal medicines, in the cure of this ulcer, it may be proper to remark, that it has been customary with practitioners to administer the most powerful remedies of the *tonic* class, such, for instance, as the bark, vitriolated iron, vitriolated zinc, &c.: but as these were employed under a supposition which is not admissible, namely, that the scurvy is a disease of the *solids*, it would be inconsistent to dwell long upon this subject. In fact, we are in a great measure ignorant whether any internal medicines are of service in the scurvy: but though it really is the case, that we know not what we ought to

prescribe, it is at least in our power to determine what we ought to interdict; and on this point we shall now say a few words.

Among the remedies, employed by those who are not in the habit of enquiring into the distinctions by which the different species of ulcers are marked, is quicksilver. It is exceedingly common with such inconsiderate practitioners to give this powerful medicine, in one form or other, in almost every case of ulcer of long standing; and, among the rest, in the scorbutic ulcer. Repeated experience, however, has demonstrated, that the scurvy, and every disease, whether local or general, in which it partakes, is extremely liable to be increased, and rendered worse by that mineral. This fact has been chiefly shewn in those instances, where, in a scorbutic subject, the venereal disease has demanded a mercurial course, the event of which has frequently been of the utmost injury in respect to the former; at least, it has been sufficiently decisive of the dangerous tendency of mercury in the disease we are now considering, and consequently, of any local complaint that may have originated in the prevalence of that disposition in the system.

The use of a bandage in this kind of ulcer, (though without a suitable diet, &c. no less insufficient to the cure than the other topics of which we have been speaking), is, nevertheless, a material assistance where the disposition to health has once begun to manifest itself. It has, at least, the salutary effect of restraining those loose granulations of flesh which are, in all instances, so redundant; and by supporting the weak and tender vessels of the part, is a means of preventing that almost continual waste of blood, which would occur from every slight friction to which the part would be exposed if not so defended.

§ 2. *Of the Venereal Ulcer.*

ALTHOUGH the symptoms of the venereal disease, when they exist independent of any other affection, are so strongly marked, that it is hardly possible for a surgeon, of any experience, to mistake them, yet we very well know, when the case is otherwise, into what a variety of difficulties we are apt to be led, and how impossible it is, in many instances, to say decisively, whether the disease we are called upon to consider be a *venereal* one or not.

This incertitude, which attaches to so many of the symptoms of lues venerea, is in none more liable to be exemplified than in the venereal ulcer; which, though exhibiting, in some instances, a very marked, and indisputable character, is, in others, extremely equivocal.

In this species of ulcer, we very often observe some one of the characteristic signs existing along with those that are evidently not venereal; and we are left in doubt whether we ought, or ought not, to resort to a mercurial course.

Where these equivocal appearances occur, it is of some consequence, besides judging of the state of the sore, to question the patient as to any other symptom of a venereal nature that may then exist, or that may have existed at any time previous to the appearance of the ulcer. We should examine whether a venereal infection had been received; whether its nature was really that of *sypilis*, or only gonorrhæal; whether the cure had been attempted by carrying the use of mercury to a sufficient extent; and, lastly, whether, after what was supposed a perfect cure, any suspicious symptom had occurred; such as a fore throat, eruptions on the skin, night pains, or nodes on the shin-bones.

If it can be clearly established, that the patient has been affected with lues; or if there be room to suspect that the means used to eradicate it have been insufficient; we may venture to conclude, even where the signs of venereal ulceration are imperfect, and accompanied with appearances that are common to other ulcers, that the disease cannot be got the better of without the introduction of mercury into the system.— It is not, however, till after a fair trial given to the common remedies, that such a plan ought to

be pursued; and the more especially as this equivocal description of ulcer is liable to take on a still more inveterate character in consequence of the action of mercury, and to become phagedænic. This is particularly liable to happen in open buboes; as will be observed in another place.

There will exist, however, in every ulcer of a venereal nature, some one or more of the following signs. The true venereal sore is the most irregular of all ulcers; it seldom spreads out into one large sore, but usually appears in a number of small distinct ulcerations, as shankers do upon the penis. A bar or division of whole skin frequently runs across, and divides, what would otherwise be a continued ulcer, into two or more. This is perhaps the most distinguishing mark by which we may know a venereal from any other kind of ulcer, though it has scarcely been noticed by writers on this subject. Another mark, which occurs not only in the true venereal ulcer, but often assists us to decide in those of the doubtful kind, is the appearance of spots of a copper colour around the sore. These spots indeed do not always appear, but when they do, they corroborate very strongly any conjectures

that may have been raised respecting the syphilitic nature of the ulcer.

Where there can be no doubt of the specific nature of the ulcer, the use of quicksilver in any mode that can be brought to affect the salivary glands, will, of itself, go a great way towards effecting a cure*. Not that local applications of a mercurial and corrosive kind should be neglected, for they are very material. Sprinkling the sore from time to time with red nitrated quicksilver, or dressing it with any stimulating ointment in which a portion of that remedy is incorporated; applying verdigrease in the same manner; or, what is, perhaps, more effectual than any other method, dressing the sore with lint dipped into a solution of muriated quicksilver; are steps very proper to be pursued. In a great many cases, the ointment of nitrated quicksilver, either alone, or weakened with hog's-lard, will be found to answer; and it is sometimes of use

* *Hydrargyrus cum Creta*, in the dose of five or ten grains twice a day, is an exceedingly good remedy for venereal ulcers, notwithstanding the opinion entertained by some, that it is inert. The *Hydrargyrus Muriatus*, in small and long-continued doses, is also a valuable medicine; but, in every decisive venereal case, mercurial friction should be had recourse to.

to brush particular parts of the sore, that appear foul and sloughy, with a solution of nitrated silver in distilled water.

In those cases where the specific character in the ulcer is not yet got the better of, it is fruitless to endeavour, by bandage or any remedy not immediately placed in contact with the sore, to assist its cure. But, when the ulcer is brought to a simple state by the adequate use of internal medicines, we should then observe every precaution laid down for the treatment of common ulcers.

§ 3. *Of the Scrofulous Ulcer.*

THE scrofulous ulcer is a disease not less manifestly depending on a particular state of the constitution than any of the foregoing; although it is not by any means to be conceived that it is generated by a specific virus.

When this sort of ulcer attacks a part, we are led to distinguish it from others of a different nature by considering the general habit of the patient, which will usually shew some signs of scrofula. Thus the countenance will be pale, the fibre universally lax, the upper lip thick, the pupils of the eyes greatly dilated, or the borders of the eyelids will appear sore and red. The glands of the neck and under the chin may also be found hardened and enlarged; some one being much larger than the adjoining glands. This, indeed, is not uncommonly the only seat of the disease, the gland having suppurated, and afterwards become an ulcer.

When a scrofulous ulcer happens on the extremities, it usually appears on the metacarpal or metatarsal bones, or on the joints of the ankle

or wrist, on which a considerable thickening takes place, and extends to some distance round the ulcer, and even surrounds the whole joint. But in very confirmed scrofulous habits, it is not unusual for the whole glandular system to be diseased. In some subjects, the vertebræ of the back and loins even become carious; abscesses form and break, sometimes on one, sometimes on both sides of the spine, and these occasionally become ulcers of greater or less extent.

There is one circumstance of which writers on the scrofula have not taken notice, but which seems deserving of a place among other facts; and that is, that infants and young persons of both sexes frequently are cut off by an high degree of scrofula affecting some, or almost all, of the viscera, whilst not the smallest external sign of the disease has been found to exist. In some of these cases the lungs, liver, spleen, &c. are studded with scrofulous knots; and in others, those parts are exempt, whilst the whole mesentery is affected, glands and all, with a scrofulous enlargement of the thickness of one's hand. An instance of the latter kind occurred in a boy of 12 years of age, who, after an illness of two or three days, the history of which could not be satisfactorily

collected, died quite unexpectedly. On dissection, the only appearances that could be discovered were those just described; nor was there any degree of inflammation that could account for the patient's death. What is still more singular is, that notwithstanding the impervious state of the lacteal vessels of the greater part of the mesentery, the boy was very sufficiently nourished, and, though not remarkably lusty, he had a florid and healthy appearance, and had been accustomed to a laborious employment.

The cure of the scrofulous ulcer is chiefly to be attempted, like that of other ulcers of a specific character, by combating the disease of the habit. That the scrofulous diathesis is exceedingly difficult to subdue, we have many and reiterated proofs; and so little encouragement have we hitherto met with in our attempts to accomplish it by medicine, that it would be of little use to detail here, with any great degree of minuteness, the different remedies that have been, from a very early period to the present time, prescribed by medical practitioners with this intent.

Suffice it then to say, in the first place, that a multiplicity of remedies, of a *vegetable* kind,

and of that class popularly called *antiscorbutic*, have been successively tried. But of these, none, except cinchona, mezereon, cicuta, and sarsaparilla, have any pretensions to efficacy, and many practitioners are inclined to deny it even to the last two. Many other of the narcotic plants, as well as cicuta, have been tried, and with various degrees of success; but there is reason to believe, that their qualities are better adapted to the treatment of the phagedænic ulcer; as we shall have occasion to observe in another place.

From the *mineral* kingdom we have been supplied with antimony, zinc, arsenic, terra ponderosa, and quicksilver. From the first of these occasional good effects have certainly been observed; and for that reason it has been very properly introduced by the London College into the formula, named decoctum sarsaparillæ compositum. Every practitioner, however, ought to be aware of the debilitating effects of antimony, those preparations of it, at least, which are formed by its union with an acid. It is true, the disease sometimes occurs in persons apparently robust, and who may be supposed prone to phlegmonous inflammation. In such, perhaps, the use of antimony may have been attended with

good effects; yet, if we decide that antimony, which is a *relaxant* of the most powerful kind, be a suitable remedy in scrofula, how can we consistently reckon the bark and other *tonics* to be so? It is impossible, perhaps, to reason on this subject; I shall, therefore, only observe, that, of all the preparations of antimony, I have found none so suitable in this disease as the *sulphur antimonii præcipitatum*, which seems to be in a great measure exempt from those objections just now stated to exist against most other chemical preparations of antimony.

On the use of *zinc*, we can only rely in a general way as a tonic. The *vitriolated zinc*, in small doses, is entitled to its share of commendation in some occasional instances; and many surgeons give it in the more active form of the *flowers*, (*zincum calcinatum*).

Arsenic is not often resorted to as a remedy in the scrofula, nor have the trials made of it been so successful as to warrant the use of a remedy so extremely hazardous in every form. That preparation of it used in St. Bartholomew's hospital, under the name of *kali arsenicatum*, (in the dose of one-sixth of a grain, to adults, three times a

day), is, perhaps, the least objectionable of any of the preparations of that mineral that have yet been invented.

Of *terra ponderosa*, contrary to the expectation of every one who knew the great abilities and integrity of its panegyrist, the late amiable and excellent Dr. Adair Crawford, experience has unhappily left us nothing to say. It, undoubtedly, *appeared* to have succeeded in three most decisive cases of scrofula that were treated in St. Thomas's hospital. That the patients *got well* is most certain; and that under the *use* of this very active remedy, combined with the muriatic acid*. But why it has failed in every subsequent trial, whether by Dr. Crawford himself, or others who were equally disposed to attribute good qualities to it, it is not possible to say. The general impression, however, is, that this mineral possesses no power of checking the scrofulous diathesis, as has been supposed.

Of *quicksilver*, heretofore, and even now, a favourite remedy with the bulk of practitioners who have occasion to treat this disease, we have

* The composition of this remedy is described in the Pharm. Chirurg.

little to advance in the way of commendation.—
On the contrary, it is most justly chargeable with
a variety of mischiefs, which have been fully at-
tributed to the peculiar obstinacy of the com-
plaint. As one of the properties of quicksilver
is known to be that of exciting the action of the
absorbent system, and, by that means, removing
local hardneſſes, and particularly thoſe of glandu-
lar parts, it was, and with great appearance of
reaſon, thought an adviſable remedy in a diſeaſe
exhibiting thoſe particular ſymptoms in ſo re-
markable a degree.

Wiſeman, the moſt judicious of all the prac-
titioners upon the old principles, employed mer-
cury copiouſly in ſcrofula, as appears from the
following paſſage in his “Method of Curing the
Evil*.” Alluding to the complications of which
this diſeaſe had been ſuppoſed capable, he ſays,
“In truth, whatſoever diſeaſe it is complicated
with, *without ſome preparation of mercury, our
hopes are vain*; nay, in ſome of the moſt de-
plorable caſes where the patient hath been
much emaciated, by reaſon of the *acidity of the*”

* See the folio edition of his works, printed in 1705;
page 245.

*serum**, I have proceeded higher to *salivate* them, and thereby recovered them," &c. To explain the cause of his success in these cases, however, it may be necessary to attend to the context, in which he refers the reader to his "Observations on Ulcers with *Caries in the Bones*," many of which, probably, were *venereal* rather than scrofulous.

It may farther be observed, that Wiseman's general object in giving mercury, was that which, in these days even, is somewhat admissible, though, by no means, to the extent which he thought proper to carry it. His object was to administer one of the preparations of quicksilver, namely, calomel, as a *purgative*; a way in which its specific, and what I conceive to be its prejudicial, effect on the constitution, is not to be expected. To make more sure of this effect, indeed, he never failed to join with it "*pil. cochiae, pil. e duobus rudii*," or some other powerful draught: so that, although his expectations of success were grounded on the action of mer-

* Wiseman's acquiescence in this received doctrine of his time, is not remarkable; and although this cause of scrofula may justly be deemed supposititious, modern times have not supplied us with a better.

cury on the *system*, and not merely as a stimulant applied to the bowels, it is probable they were not answered in those successful cases of which he speaks, but upon a principle which he did not comprehend. Every surgeon, indeed, must be sensible of the truth of this who is aware of the palpable and indisputable fact, that *purging* and *salivation* are not compatible in practice; and that the latter cannot be accomplished, or, if at all practicable, is accomplished with difficulty, whilst mercurials operate violently on the intestines in the course of their being administered.

In making these remarks on the practice of the honest and illustrious Wiseman, I am commenting, not only on what was the universal practice of his time, but on what, under some certain limitations, has existed since, and is even the practice of the present day. It is evident he was acquainted with all the remedies used in scrofula at present, except, indeed, that very important one, Cinchona, of which he could have no knowledge. Remedies of the *tonic* class were not then had recourse to in the scrofula; nor were the good effects of sea-bathing known:—but antimony, particularly that preparation called *diaphoretic*, was in use; and also burnt

sponge, a remedy in no inconsiderable repute at present. Sarsaparilla, China root, and other vegetable substances, to which Wiseman gives the name of "antistrumous," were employed most abundantly, and, on the whole, with the same degree of advantage as at present, which is but little.

Modern practice has, indeed, introduced the use of a vegetable which was unknown to the earlier practitioners, and which has the testimony of some eminent men in its favour, I mean *mezereon*. The late Mr. Hunter ranks it in the first order of vegetable substances to be resorted to in the scrofula. He directs it, however, in considerable quantity; and it unfortunately happens, that the taste of it is so exceedingly acrid and nauseous, and its action on the stomach so liable to produce sickness, that few patients can be prevailed on to carry the trial of it sufficiently far to ascertain what its properties really are.

But to return to the subject of our objections to the use of quicksilver, or any of its preparations, in the scrofula; it is only necessary to appeal to the experience of those who have witnessed its effects in venereal cases. Nothing

is more common than to see the scrofula superinduced by a mercurial course, in constitutions which before remained unaffected with it.— Nothing, in fact, forms so great an impediment, as does the scrofula thus excited, to the surgeon's endeavours to destroy the venereal virus.

Glands, brought into a state of inflammation by the irritation of a shanker, and which, if left to suppurate, would go through that process favourably, are very commonly rendered scrofulous by the quicksilver rubbed in with a view of dispersing the tumour. Venereal ulcers of the throat are, by the same means, converted into scrofulous ulcers; and whilst mercury continues to act on them, that disposition is increased.— Hence we are compelled to change our plan even before the venereal disposition in the part is overcome, and to resort to the bark, the “*antistrumous vegetables*,” and sea-bathing, to counteract the scrofulous diathesis which the mercury has brought on.

But, admitting there should occur none of these *external* signs of the mischievous effects of quicksilver in habits predisposed to the scrofula, it, nevertheless, often happens, that *internal*, and

more fatal ones take place. Some of the viscera are brought into a state of disease; the lungs more especially; and when this happens in a person who has had a venereal infection, the phthisis brought on by the remedy is called a *venereal consumption*; and the patient more certainly getting worse as the specific for venereal infection is administered, at last dies in consequence of the treatment.

What has been said may, perhaps, be sufficient to awaken the attention of medical men to what, if true, is a fact of great practical importance. The effects here attributed to mercury, are not, perhaps, observable in every instance of its exhibition in a scrofulous habit; but that it is truly liable to the serious objections we have brought, is a fact, which, now and then at least, is confirmed by some striking and fatal instance*;

* It may seem to the reader, that more is said on this subject than is required by the object of this section, which is to speak of the *Scrofulous Ulcer* and its treatment. He will perceive, however, as has already been suggested, that an immediate and necessary connection exists between the treatment of the general disease and this local symptom of it, and that it is no less necessary, in speaking of the internal remedies employed by surgeons, to distinguish those that ought to be avoided than

and it is devoutly to be wished, that a close attention to what happens in those cases where mercury *must* be employed, and where, after its exhibition, scrofula *does appear*, may throw some farther light upon the subject. But, notwithstanding what is to be apprehended from the full constitutional effect of mercury, there are some preparations of that mineral, calculated to act simply on the *intestines*, which, far from deserving our reprobation, have, on the contrary, most salutary effects in the treatment of the scrofula.

There is, perhaps, no article in our list of purgatives which so effectually evacuates the intestines, and produces that effect with so little irritation and disturbance, as the preparation we call *calomel*. Some purgatives act by increasing the secretions from the intestines, and others by aiding their peristaltic motion; but there is

than it is to bestow just encomiums on those that deserve it. I have, in fact, been led to some length in this part of my subject, from knowing, that a modern treatise on the scrofula, in other respects judicious, advises a *reliance on mercury* for the cure. That I am not indisposed to give *calomel*, used as a *purgative*, its due share of commendation, will be seen in the sequel; but beyond that, I cannot but feel the importance of opposing the use of quicksilver in any form except, perhaps, that of a topic, which may, in some instances, be expedient.

hardly any single article of the *materia medica*, from which, in both these ways, effectual and general evacuation of the bowels can be obtained, unless it be this excellent preparation, which has been known, in various instances, to perform the task, when other cathartics, under various modifications, have proved useless.

In scrofulous subjects, there exists a great disposition in the vessels to throw out coagulable lymph. Hence it is that, in such persons, fresh incised wounds heal by the first intention with singular rapidity; and even in large operations, such as amputation, there exists an astonishing tendency in the parts to contract, and, as it were, *glue* themselves together, the surface that remains unhealed, being nevertheless impeded, by thick coats of coagulable lymph successively thrown out, and which demand the application of escharotic remedies.

This disposition is more particularly evident in subjects of the fat, chubby, and florid description; but it may also be traced in some of the emaciated sort, and there appears to me a probability, that this disposition prevails pretty universally in the glands, those more especially con-

cerned in supplying the secretions natural to the primæ viæ. Hence, perhaps, we may account for (what is a well known circumstance occurring in scrofulous persons, particularly children,) the inactivity of the bowels, and the glairy nature of their secretions, which form a convenient nidus for worms, and other lodgments, that would not be retained if the peristaltic motions were more vigorous.

But whether this state of the intestines may, or may not, be truly accounted for on these principles, its existence in scrofulous subjects is an acknowledged fact; and it is also very generally allowed, that the occasional removal of these pernicious accumulations by a suitable purge, far from adding to that debility, which, according to many, has a principal share in the disease, actually affords strength, by removing the impediments to nutrition, and stimulating the languid mouths of the lacteal vessels.

Every remedy administered by the mouth, and which occasions intestinal evacuation, goes under the general character of a purge; and it is common to medicines not of that class, such as the bark, when given in an over-dose, to act as

cathartics. But, as has already been observed, those medicines which produce stools by increasing the secretions from the glands of the intestines, do, by no means, the same thing as purgatives which prove such by augmenting the peristaltic motions. In the latter case, the intestines are merely excited to expel the fœces which happen to be contained in them: in the former, a considerable addition of fluids takes place, which renders the fœces more liquid, and causes the natural motions of the intestines to protrude their contents more expeditiously towards the rectum than would happen if the fœces remained solid.

I need not enumerate the different articles of the materia medica to which these distinct properties are attributable, as there is no professional gentleman so unexperienced as to be ignorant of them. It is sufficient to observe, therefore, that all the saline purgatives, as Glauber's, Epsom, Rochelle, and other salts, act by increasing the secretions; whilst rhubarb, fenna, aloes, and many other vegetable purgatives, act chiefly by increasing the peristaltic motions. It is owing to these distinct qualities which belong to the class of cathartics, that we are in the daily habit of combining them, in order to insure a beneficial

co-operation, and thus evacuate the intestines more effectually than could be done by the administration of any of them singly.

There is another property, with regard to purgatives, which is not less worthy of notice; and that is, the disposition manifested by some of them to act exclusively on *particular parts* of the alimentary canal. It is not easy to state, even with the appearance of accuracy, what is the nature of these peculiar affinities, if I may so call them; but that the general fact is so, has been sufficiently proved by the well known property of aloes to act exclusively on the rectum*.

But as it forms no part of my design to enter into these speculations farther than may be warranted by their connection with the general sub-

* If this digression were not already too considerable, it would be curious to enquire into the cause of that still more singular property in aloes of producing a sort of *reiteration* in the actions of the rectum; so that a grain or two shall not only produce an evacuation that is *immediately wanted*, but also dispose the part to act periodically. The stimulus of aloes, too freely applied to the rectum, produces the piles. May we suppose the permanent irritability brought on by a single dose, sufficient to make the intestine in greater haste to act on the descending fæces? Or is it that this local effect actuates the higher intestines by sympathy?

ject of ulcers, or than may tend to shew the propriety with which a mercurial preparation may be used in scrofula as a purgative, notwithstanding its mischievous effects when given with any other view; I shall cut short this digression, by merely repeating, that, among the few remedies which act at once by increasing the secretions from the mucous membrane of the intestines, by augmenting the peristaltic motion, and by an uniformity of operation on the whole intestinal canal, there is, perhaps, none equal to calomel: and it is to the possession of these qualities *alone*, and not to its power of acting specifically on the *system*, that the merit ascribed to it by Wiseman, and other writers, should be attributed.

A remedy in the scrofula, on which, heretofore, practitioners have had great reliance, is *burnt sponge*. Some, however, attribute the good effects of it solely to the mineral alkali contained in it; and on that account, substitute what, in the new language of the College, is called *natron*, as a less inelegant medicine. The popularity of this remedy is, in a great measure, owing to its apparent success in the treatment of the Derbyshire neck; though it is by no means clear, that the co-operating remedies employed

in the cure of that complaint, namely, calomel, and other purgatives, have not a very material share in the process.

Speaking then of burnt sponge as of mineral alkali, may not its action, besides that to be expected through the medium of the circulation, be traced to something analogous to a course of purgatives? Or, at least, may not it have the effect of dissolving or decomposing that adhesive mucous, which we have supposed, in this disease, to interfere with the healthy actions of the intestines?

It is not, perhaps, to be denied, that one of its modes of operation, is that of a kind of universal stimulant; for there is great reason to suppose, that, in common with turpentine, and some other substances, alkalies enter the blood vessels, without undergoing any change in the stomach. But, at least, that they may pass through the first passages without undergoing the process of assimilation, may be fairly conjectured, from their known property of entering the bladder, and acting as solvents on urinary calculi. In their course, therefore, through the bowels, I see no difficulty in supposing, that they combine

with, and tend to carry off, those glutinous secretions which obstruct the mouths of the lacteal vessels, and thus produce silently, and by a sort of chemical combination, the same effect as is to be expected from the occasional exhibition of purgatives.

But whatever be the *modus operandi* of this remedy*, it is certainly amongst those that occasionally prove serviceable in the scrofula, and that even in very inconsiderable doses. If given largely, indeed, and for a length of time, it may prove injurious to the system; and for that reason, perhaps, it is, that, with most practitioners, the very small proportion usually exhibited when the form of *burnt sponge* is preferred, is found to answer better than natron in its *prepared* state.

From speaking of the effects of mineral alkali given internally, we come to consider the

* Dr. Cullen, speaking of the class of remedies termed *attenuantia*, includes a subdivision termed *resolventia*, which, he says, "are properly such substances as give *fluidity*, to portions of our fluids that had been *formerly concremented*." Among the remedies of this description, it is worthy of notice, that he has included both the fossil and volatile alkalies. May not these *resolve* the *concremented lymph*, which seems to constitute the disease in the case of scrofulous tumours?

uses of *sea-bathing* in the scrofula.—It has been very unwillingly granted by some writers, that bathing in salt water, is of greater efficacy than bathing in any other sort of water of the same temperature; for, say they, it is alone the *tonic* effect of the cold, suddenly and universally applied to the body, which is of service; and this effect may be produced equally well by immersion in fresh water. Not to advert to the multitude of facts which militate against this supposition, we may very reasonably suppose, that so general an application of salt to the skin is attended with some share of advantage, for common salt is a compound in which the mineral alkali predominates; and from daily immersion, no doubt, considerable quantities of it must be absorbed. I would not, however, be supposed to contend, that the good effects of sea-bathing in the scrofula depend upon the application of salt to the surface of the body. On the contrary, I admit its inferiority to sea water as a cold bath; yet I am, nevertheless, disposed to consider the salt as no despicable or unnecessary agent in the result.

Perhaps, however, we shall not give to this remedy of sea-bathing its full share of credit, if we do not also take into the account the effects

of *sea air* on the constitution. We well know, that the air on the sea coast is loaded with saline particles, which enter the lungs on inspiration, and also apply themselves continually to the whole surface of the body. That this is the case, does not admit of a doubt, since the particles of salt are tasted as they fall on the lips of those who walk at some distance from the sea; and that this slight application of salt alone to the body, is capable of doing *some* service in scrofulous diseases, is manifest from the following case* :—

A gentleman, between twenty and thirty years of age, very healthy in other respects, had a foul ulcer with thick and curling boundaries on the edge of his tongue. Its commencement for some few weeks was marked only by a small lump, or thickening of the part, which at last gradually opened by a kind of fissure, displaying an ulcer with a foul buff-coloured surface, which increased, in the course of a few months, to nearly the dimensions of a sixpence. The disease, however, manifested itself much beyond this, by the swelled state of the surrounding parts. The patient, while in this situation, had occasion to

* Communicated to me by a medical friend.

take a sudden voyage to the Continent, and being apprehensive, though the pain and inconvenience he then felt were not so considerable as from the appearance of the sore might reasonably have been expected, that the disease might proceed to a serious length if neglected during so long a journey, he thought it advisable to apply to a professional gentleman, by whose instructions he might be guided in the treatment of it, and from whom, indeed, he received a supply of such medicines, both topical and for internal use, as the state of the ulcer seemed to require. The hurry of preparation, however, interfered with his intention of making some use of his medicines even before his embarkation; and, in fact, nothing was done; but to his great surprize, during his detention for a few days on the sea coast, the ulcer in his tongue, which had existed for so long a time, healed up; his medicines were consigned to the jaws of the *ocean*, and he has remained perfectly free from the complaint ever since.

As in this case there could be no other application of the saline particles, either topically or to the system, but what was effected through the medium of the sea breezes; as *no medicine whatever* was used by the patient; and as the

disease was gaining ground during his continuance in London, the place of his ordinary residence; what can be the conclusion, but that the state of the atmosphere on the sea coast occasioned the cure?

But let us now consider sea-bathing in the light of a tonic, in which most people view it, and certainly not without good reason. If immersion in the sea were unattended with the concomitant benefits of which we have been speaking, it would, of course, rank no higher as a remedy for the scrofula, or, indeed, any other disease, than fresh water of the same temperature. The tonic effect is produced merely by the sudden and universal application of cold to the surface of the body, by which the extreme vessels are invigorated, and a more equable circulation of the blood in them is occasioned. The sudden constriction of the vessels of the skin, causes the blood to retreat back upon the viscera; and, by that salutary stimulus, is instrumental in exciting in them an unusual degree of exertion to restore the equilibrium of the circulation. This exertion, it is likely, produces tone and vigour in parts whose functions before were languid, and it is thus, perhaps, that in glands affected with

struma, a beneficial change is produced. The opportunities of immersion in cold fresh water, are, undoubtedly, within the reach of every one; yet the trials made of it by scrofulous patients, so circumstanced as not to have the opportunity of bathing in the sea, are, by no means, such as to put these two remedies on an equal footing, or to support the opinions of those who rely on the mere *tonic* properties of salt water.

Since we know, however, by chemical analysis, in what the sea differs from fresh water, something is to be done by introducing a suitable proportion of salt into the water in which the patient designs to bathe. The quantity necessary is about 5lb. to every 12 gallons of water*.—

* The experiments made by M. de Pagés, of which an account is given in his voyage round the world, evince a considerable difference in the saltness of the sea in different latitudes. Each of his experiments was made on one hundred pounds of sea water, taken at the depth of ten fathoms, and weighed in water scales.—The author has exhibited a table of these results, in which it appears, that $46^{\circ} 12''$ S. lat. 100lb. of sea water gave $4\frac{1}{2}$ lb. of salt, and in $1^{\circ} 16''$ only $3\frac{1}{2}$ lb. and that in 74° N. lat. it gave $4\frac{1}{2}$ lb. and in $4^{\circ} 22''$ only $3\frac{1}{2}$ lb.; these being the highest and lowest latitudes in which the experiments were made, and also the greatest and least quantities of salt obtained. Accuracy, perhaps, is not very material to *our* purpose, and even an excess of salt can be attended with no bad effect, for which reason, I have a little exceeded the proportion here mentioned as the highest.

This, at least, may be considered as somewhat preferable to fresh water alone, yet experience proves it far inferior in efficacy to that element of which it is designed as an imitation, for the reasons which have been already suggested.

But the effect produced on the constitution by the use of cold bathing, is attended with some phenomena, which have embarrassed the thinking part of the profession not a little. For it has been suggested, and the idea has also been sustained by experiments, that the same beneficial results, in similar cases of disease, have attended the use of the *cold* bath and the *hot*; or, at least, that the degree of cold in the one, and of heat in the other, seem to admit of being so managed as to produce nearly the same effect.

Some evidence of this fact has resulted from the practice of employing the tepid bath, of late years, in hypochondriacal cases, and in some other diseases, which, according to the generality of practitioners, have rather demanded the *tonic* properties, heretofore exclusively attributed to the *cold* bath. Perhaps the experience of a few years more may establish the like fact with regard to the treatment of scrofula, for certain it is, that

since the opportunities of *warm salt water bathing* have become frequent on the sea coast, a variety of instances have occurred, in which, essential benefit has been derived from the use of it. For internal, as well as external, scrofulous affections, for those of the mesenteric, and other glands, for white swellings, diseases of the prostate, ulcers, and various other forms in which the scrofula is liable to occur, it has, I believe, been demonstrated, that the tepid salt water bath has, at least, been of as great, but, in some instances, of much greater, service, than sea water when used in the state of its natural temperature.

If this be the case, what becomes of the principle on which sea bathing is so universally, and almost exclusively, supposed to counteract this disease? Is the effect, called *tonic*, capable of being produced by any degree of relative warmth? Or is the term ill calculated to express the effect *really occasioned* by *cold* bathing? But let us now proceed to consider the properties of a remedy of late years more implicitly confided in than, perhaps, any other in the treatment of the scrofula: this remedy is the bark.

That this medicine, of such excellent use in various other diseases, is also an important one in

that now under our consideration, cannot be denied ; and, perhaps, there is scarcely any state of the disease for which it is so well calculated as the scrofulous ulcer. The great misfortune is, that it requires to be administered, not only in considerable quantity, but also for a great length of time, to produce any very obvious good effect ; and the scrofula, in every form, is a disease of so protracted and slow a nature, that scarcely any one can persevere sufficiently in the use of it*. But, if this be the case with adults, how much more does it form an objection, when it is required to administer this remedy to children, the most usual subjects of the disease of which we are speaking ? These are, in fact, precluded wholly from the benefits of it. Let us see, however, what the celebrated Dr. Cullen says of its use in the scrofula,

“ The bark,” says he, “ has been employed in scrofulous cases. The scrofula is attended with ulcers *mali moris*, depending on a *flaccidity of the vessels of the part*, and of the *system in general* very often ; so that here the bark is plainly

* We learn from Dr. Fordyce, that the full effect of the bark is only to be expected when taken to the quantity of an ounce in a day.

indicated; and I make no doubt of the success had by Doctors Fothergill and Fordyce in such circumstances. But it must be observed, that the bark *very often fails* in this disease. Even these gentlemen have not always succeeded, because, I imagine, this disease is often not to be cured *certainly* by *any* medicine; for it seems often a disease of the *lymph* seated in the lymphatic vessels, and not depending so much on a *general flaccidity of the system* as in some particular affection of the lymphatics, and *matter generated there**."

This account being sufficient for our present purpose, it is unnecessary to add to it; and especially as the subject will again fall under our notice when we come to describe the general treatment. There remains only one more remedy, or class of remedies, on which it is necessary to remark, and these are *stimulants*, the most appropriate of which, and that to which we shall chiefly confine ourselves, is *volatile alkali*.

* Vide Lectures on the Materia Medica, Edin. 8vo. ed. 1781, page 251. Astruc says, "As this disorder is in the *lymphatic glands*, the *peccancy of the lymph* must have given rise to it." Treatise on the Dis. of Children, page 197.

In the use of stimulants, in every disease, we ought not only to consider their immediate, but also their subsequent, or secondary, effects; which, as in the case we are now treating of, are frequently in direct opposition to the intention with which they are at first employed.

The late Dr. Brown, who promulgated, and so far supported, a system of medicine of *his own*, as to make converts of a large proportion of the medical profession of the present day, very justly states the *secondary* effect of stimuli to be *weakness*, or, to use his own language, "*indirect debility*." Hence we see how improperly stimulants, in a limited view, are used in the scrofula.— Happily, however, we have, by the assistance of the bark, the means of rendering their effects on the animal fibre *permanent*; a circumstance of the highest importance in every view, since, by combining these two remedies, we produce a third of very extensive utility.

Of the various stimuli which the materia medica supplies, there is none, perhaps, by many degrees so appropriate to our purpose as volatile alkali; and the reason very naturally suggests itself from what has already been observed on the

use of mineral alkali. Superadded to the effect which may be expected of it as an alkali, we have also that of a stimulant of extraordinary power, and one with which the stomach will dispense much more largely than its sensible effect on the organs of taste and smell seems to indicate*.

There can be no doubt of the propriety of classing stimulants amongst the remedies necessary to be employed in a disease where debility is so leading a feature; provided that their effects can be rendered permanent by the use of the bark, of which there is no question. We shall not, however, dwell on this subject in particular, but proceed to consider in what way the remedies of which we have made mention; or some of them, may be employed with the greatest effect in the scrofula.

In entering on this topic, it may not be improper to premise, that I do not mean to speak of any of those remedies whose properties, after an abundant trial, have proved so precarious as to make their choice a matter of mere specula-

* "If, by any means, we could defend from its action the mouth and fauces, it might be thrown into the stomach in a large dose, even without inconvenience."—CULLEN.

2. Iodine in vol. 2d

tion and conjecture; but rather, in a concise way, to state in what manner those few may be best employed, which, in so far as I have seen, are worthy of being preferred to the rest. I shall likewise confine myself to the treatment of those scrofulous affections which are external; and which we will suppose to arise in the *adult* subject; because, in infants, we are precluded the use of many of our best remedies, and must therefore, of necessity, rely on those whose qualities are somewhat inferior, but possess the advantage of being more easy to administer. In this account too I shall speak of the use of topical remedies, which have not as yet been adverted to.

Let the external signs of scrofula in the patient be what they may, our first endeavour must be to reach them through the medium of the constitution. Here, to say nothing of the means already spoken of, what a host of remedies present themselves, equal alike in their powers, and in their deficiencies. On which of these, after the experience of so long a period, an experience which has decided so little in their favour, shall we fix our choice? We must, at least, resort to those on which the sentence of *positive inefficacy* has not yet been passed, in preference to those

which the united judgment of medical men seems to have rejected. Those which are *under trial*, are, at least, preferable to those that have been *fully tried*, and *found wanting*.

If the scrofula has manifested itself, as it most frequently does, in the form of an enlarged gland, advancing daily in size, and threatening to terminate in suppuration, its progress should be counteracted by the use of every kind of topic that is likely to diminish the latent and deep seated inflammation in the part. For this purpose, cold lotions, of a variety of kinds, are in use; such as lead water, aqua ammoniæ acetatæ, lime water, solutions of vitriolated zinc, of muriated ammonia, of alum, &c. It is common to apply these upon bits of linen rag, laid one over the other, to a sufficient thickness, and kept continually wet by repeatedly dipping those on the outside. It is difficult to say which of these applications answers best; or even whether they are any of them of much service. Some practitioners rather prefer the use of liniments, of the kind named discutient; such as a simple solution of soap in brandy; or the same remedy joined with an equal quantity of the water of acetated ammonia, or with a small quantity of water of

acetated litharge. Some employ liniments of a moderately stimulating kind; probably, with a view of exciting the absorbents to action. The composition of these is various: olive oil, with spirit of hartshorn, or water of pure ammonia; or a solution of soap with the latter addition; or the composition, called *embrocatio ammoniac**.

Other practitioners resort to plasters, in which discutient, or repelling remedies, are variously combined; and from these, if not composed of ingredients of too stimulating properties, very favourable effects sometimes result, though the event is almost a matter of accident.

Speaking generally, indeed, of all these remedies, there is very great uncertainty as to their effects. They either do nothing, or if they act at all, they are just as liable to forward as to retard suppuration. The same may also be said of the like remedies employed in the form of fomentations or poultices. Plasters, indeed, are to be excepted from the charge of inactivity, for, independent of the properties of the substances which compose them, they act by confining the

* Pharm. Chirurg.

perspiration, and, undoubtedly, hasten the crisis of the tumour in one way or other.

Not to dwell, however, on these seemingly unprofitable speculations, let us circumscribe our endeavours to prevent the progress of inflammation and suppuration in scrofulous tumours, within a narrower compass. To impede the progress of any scrofulous swelling, and prevent its becoming an *ulcer*, we should, in the first instance, draw blood from the part, by the application of a sufficient number of leeches; repeating this several times successively, at intervals of three or four days, or a week, according to the effect produced. We should also, without delay, prescribe an emetic, and repeat it twice or thrice; or we should administer some purgative and emetic remedy united, so as to produce a moderate evacuation in both directions. This latter effect may be very conveniently obtained, by a dose of calomel joined with a very small proportion of tartarized antimony; a formula extremely well calculated for children.

In the intervals between the application of the leeches, as it will be thought right to be doing something, and to take even a *chance* of

promoting the great object of dispersion, we should apply the water of acetated ammonia to the part, or a solution of muriated ammonia in brandy, or even a solution of common salt in water, in the proportion of 1 part to 28. If it can be had, we may use, in preference to the foregoing, a poultice of the well-known marine plant, called *sea tang**, bruised in a mortar, and applied cold, a remedy approved of by the late Mr. Hunter. If, in spite of these endeavours, the swelling gives pain, the inflammation seems to gain ground, and the skin becomes red, we may try the effect of pounded ice applied to the part, and renewed as fast as it melts away.

* The *fucus vesiculosus* of Linnæus. The virtues of this plant have been copiously spoken of by Dr. Russel, in his Treatise on the Use of Sea Water in Diseases of the Glands. He considers the saponaceous liquor contained in the vesicles of this plant, as an excellent *resolvent*, and recommends the scrofulous tumours to be well rubbed with it, (after bruising the plant with the hands) washing them afterwards with sea water. He recommends for the same purpose the following method to be taken:—Having gathered two pounds of the *vesicles* of this plant, in the month of July, infuse them in a quart of sea water for a fortnight, when the liquor will have acquired the consistence of honey. The swellings are to be rubbed with the strained liquor three or four times a day, washing them afterwards with sea water. It is very probable that the scrofulous ulcer would be benefited by a somewhat similar treatment, where there is an opportunity of putting it in practice.

In some cases, where the swelling is particularly indolent, increasing only in *size*, and without shewing any other disposition, I have witnessed the best effects from the use of a liniment composed only of vitriolic acid and olive oil, in the proportion of one dram to an ounce of the latter. Some have also been benefited by the use of the linimentum bituminis ammoniatum, a remedy employed as "a most powerful *dissolver of thickened lymph*," by Dr. Kirkland.— In some, a plaster has been of service, composed of equal parts of the quicksilver and warm plasters, and lightly sprinkled towards the centre with camphor finely powdered.

The other remedies necessary to be used, as well to prevent the progress of a tumour to the state of a scrofulous ulcer, as to promote the cure of the latter when established, are, sea-bathing, if it can be had, or the artificial sea-water bath already spoken of; the use of natron internally, either *per se*, or in the state of burnt sponge; the occasional exhibition of calomel, as a purge; a copious and persevering exhibition of the bark; and, joined with it, if not likely to occasion disgust in the patient, a good proportion of volatile alkali.

The bark will, in general, be found most effectual, when exhibited after a course of calomel purges have been persevered in, or where emetics have been premised. It is expedient, indeed, in most cases, to employ these means *alternately*; for the bark will, after a time, lose its effect; and, in that case, the use of calomel purges should be adopted*, and, after a while, the bark will again be found to succeed as well as at first.

Decoctions of sarsaparilla and mezereon, in conjunction, or separately, are not to be rejected, when more promising remedies seem to fail, or where the opportunity of employing them is particularly favourable. Many patients are soon disgusted with the bark, no less on account of its nauseous taste, than its appearance, when employed in substance; and when this is the case,

* It may not be amiss to observe here, that the mode of preparing calomel by *precipitation*, after the manner of *Scheele*, (now universally practised in consequence of the brevity of the process, by the London Chemists,) is, by no means, favourable to its action as a *purgative*. It may, indeed, be very reasonably questioned, whether it is exactly the same medicine as the old calomel, prepared by sublimation, and afterwards levigated. This precipitate, which has been received of late by the College, under the name of *hydrargyrus muriatus mitis*, will stand in need of the addition of some drastic, or some other purgative substance, when employed with the view here proposed.

it is some relief to them to use decoctions of *saraparilla*, &c. in its stead*.

The scrofulous ulcer, though, in most cases, it is found to affect glandular parts, and to arise from the suppuration of the glands themselves, is, nevertheless, frequently seen in other situations. There is, indeed, no part of the body where it may not exist, and its appearance on the extremities, is scarcely less common than on the neck, breast, &c. It is particularly liable to occur in those places where the disease has reached the bones; and will often remain, and extend itself, after the caries is got the better of. It also forms a description of ulcer very difficult of cure in the legs, ancles, and feet; because, independent of the obstacles formed by the specific character of the complaint, we have to contend with those impediments which are common to every ulcer in the same disadvantageous situation.

This kind of ulcer is not attended with any striking marks by which its specific nature may be

* Much of the disgust arising from the taste of bark, is to be attributed to its *astringency*, and this is remarkably overcome by its being taken in milk, or, according to some, in mucilage of gum arabic.

distinguished. It may, however, be pretty accurately discriminated by the concomitant symptoms and appearances, its situation, &c. The discharge is likewise of a curdled, whitish, unnatural appearance; the edges of the sore are thick and projecting; and the surrounding parts are tumid, and insensible in general, though, in some cases, very painful.

It has been already observed, that the treatment of this ulcer depends almost wholly on the treatment of the disease in the system. Nevertheless, there is something to be done by means of local applications; at least, it is indispensably necessary, that every precaution required in the treatment of a common ulcer, should be regularly and attentively observed in this; such as a daily renewal of the dressings, and every regard to cleanliness, as well as to the circumstances under which motion or rest should be enjoined.

If bathing in the sea can be had, it is of service to expose the ulcer at the time of going in, and the same if an artificial sea-water bath be used; or if circumstances do not admit of either of these, the ulcer may at least be washed daily with cold salt water, sprinkled over it by means

of a sponge; this, indeed, should be a preliminary to every other dressing that may be intended.

The topical applications supposed to facilitate the healing of the scrofulous ulcers are exceedingly numerous; but we shall here only notice those few that experience has most entitled to a preference. Solutions of natron; or of acetated ceruse; of vitriolated zinc; of muriated quicksilver; of ammoniated copper; or of nitrated silver; are each worthy of a trial; and these should either be brushed over the sore with a camel's hair pencil, or applied on pledgits of lint.

There is some reason to fear, that common falves, and greasy applications, rather do mischief; they are therefore to be avoided, if possible, even as *outer* dressings, but much more so as dressings to the ulcer itself. Where their great convenience overbalances these considerations, with regard to the former purpose, much of the objection may be obviated, by a choice of such ointments, as include in their composition an ample proportion of soap; for by that the clamminess of such falves is prevented, and the dressing, when taken off, leaves the surrounding skin clean and unsmear'd.

There are, however, some formulæ which are exceedingly well adapted to the treatment of the ulcer itself, and which yet admit of oil, &c. among their ingredients, as a means of incorporating other substances. These compositions are too numerous, and on too equal a footing, with regard to their virtues, to require any circumstantial account in this place*. We would therefore observe in a general way, that the most serviceable applications to scrofulous ulcers, are those ointments which include mineral alkali, neutral salts, (as the vitriolated natron) volatile alkali, quicksilver in the nitrous or muriatic acids, honey, or the juices of narcotic vegetables. With regard to my own experience on this head, nothing has succeeded better with me than a composition of *unguentum picis* united with such a proportion of *sal cornu cervi* as will just stimulate without inflaming the ulcer. It must be observed, however, that when this ointment is employed, it should be mixed at the time of dressing the wound; as, otherwise, its qualities will be impaired, by the escape of the volatile parts of the salt into the atmosphere. Next to

* The class of cerates and unguents, in the Pharm. Chirurg. include several of them.

this remedy, I know of no better ointment than the ceratum mellis, prepared with the emplastrum lythargyri cum gummi.

It would be superfluous here to repeat the directions given in the former part of this work, respecting the treatment of ulcers in general, which it will be necessary the surgeon should observe, in a greater or less degree, in the treatment of those of a specific character: for whilst the necessary internal remedies are employed, to counteract the disease in the system, no diligence should be wanting in the choice and management of such applications as may dispose the ulcer to heal. This, indeed, it may be sufficient to mention here, once for all; as this remark will be found to apply, no less with regard to the subject of which we have just been treating, than to the two we shall now proceed to examine.

§ 4. *Of the Phagedænic Ulcer.*

THERE is no subject, perhaps, which surgical writers have treated with so little perspicuity as that on which we are next to employ our attention. It seems, indeed, as if the knowledge of this singular species of ulcer had made no advances since the time of Celsus, and that the want of success, which has too uniformly attended the treatment of it, had operated on the surgeons of later times, as an effectual discouragement to investigation. To methodize the jarring opinions of those who have attempted the subject, however, and to draw from facts a system replete with ingenuity, has been a task reserved for an ingenious writer of very late date, who has so thoroughly anticipated the few ideas I had collected on the subject, and expressed those ideas in a language so much more clear and satisfactory, that I shall do little more than recite his opinions, and often his own words, in the course of this enquiry.

That very erroneous and inadequate notions of this species of ulcer have been heretofore re-

ceived by professional men; and, in fact, that little or nothing of its true nature has been communicated by any medical writer from the time of Celsus, may be fairly inferred from the scanty share of notice bestowed on it in one of our latest publications, which lays claim to a considerable degree of popularity. Mr. Benjamin Bell, though with every advantage of what preceding writers may have said on the subject, speaks in a very general and cursory way of the phagedænic ulcer, as little more than a high degree of *herpes exedens*. Thus, in his *Observations on the Cutaneous Ulcer**, he says, "The *herpes exedens*, so called from its destroying or corroding the parts which it attacks, at first generally appears in the form of several small ulcerations, all collected into larger spots, of different sizes and of various figures, with always more or less of an erysipelatous-like inflammation.—These ulcerations discharge large quantities of a thin, sharp, serous matter; which sometimes forms into small crusts, that, in a short time, fall off; but most frequently the discharge is so thin and acrid, as to spread along the neighbouring parts, and there to produce the same kind of sores.

* Treatise on Ulcers, Sect. ix. p. 314.

“ Though these excoriations, or ulcers, do not, in general, proceed farther than the cutis vera, yet sometimes the discharge is so very penetrating and corrosive, as to destroy the skin, cellular substance, and, on some occasions, the muscles themselves. It is this species of the disorder which should properly be termed the *depassent*, or *phagedænic*, ulcer, from the great destruction of parts which it very frequently occasions: but, by a piece of very great impropriety, ulcers of the herpetic kind have most commonly been considered as connected with scurvy, and have, therefore, by practitioners in general, been usually distinguished by the appellation of scorbutic.”

Whether the erroneous opinions respecting the phagedænic ulcer, which are here attributed to the generality of practitioners, be justly chargeable on them or not, it is certain, that the nature of the disease has not, till of late, been pointed out with any thing like precision. It is not improbable, indeed, that the practice of employing quicksilver in the treatment of obstinate ulcers, may have produced the phagedænic disposition in parts not originally affected with it; for we have many proofs of its producing that

species of mischief, where it has been copiously employed during the suppuration of a bubo, &c. and thus it is, that surgeons may have entertained very confused notions of the nature of phagedæna; from the circumstance of the change they may have remarked in some ulcers from a phagedænic character to some other, or *vice versa*, according to the use or disuse of mercurial remedies employed with a view to affect the system.

Two distinct species of phagedæna have been described: one denominated "a sloughing with ulceration, and each in succession;" the other, ulceration, kept up by the irritation of the fermented pus*. The first of these is the kind of ulceration we have already described, as occurring in hospitals, to patients in a state of debility, on whom extensive operations have been performed. The constitution being predisposed, and the morbid poison floating in the atmosphere getting access to their wounds, a most formidable phagedænic ulceration, of the species we are now describing, arises, difficult to conquer, and frequently rendering necessary a repetition of the operation.

* Adams on Morbid Poisons, chap. iv.

Phagedænic ulcerations upon the penis are ranked by Celsus among the cancers. Thus, in his section*, "*Concerning the cure of a CANCER in the penis,*" and that immediately following, "*Of the cure of the PHAGEDÆNIC ulcer in the penis,*" he treats the subject in the following words:—"In what we have hitherto described, there is still no gangrene; to which, as in the other parts, so more especially here, ulcers are liable. It begins with a *blackness*. If this seizes the prepuce, a probe must be immediately put under it, and an incision made; then the extremities are to be laid hold of with a vulsella, and whatever is corrupted must be cut away, and even some of the sound part taken off, and the place cauterized. Whenever any part is burned, the next step is to apply lentils; afterwards, when the sloughs have cast off, the cure is the same with that of common ulcers.

"But if a gangrene has seized the penis itself, some of the escharotic medicines must be sprinkled upon it, chiefly that which is composed of lime, chalcites, and orpiment. If medicines fail of success, here also whatever is corrupted is to

* Vide Greive's translation of Cels. lib. vi. cap. 18; or Cels. *ibid.*

be cut out with a knife, in such a manner as that some of the sound part be taken with it. This rule is as universal as the former, when a gangrened part is cut away, that the wound must be cauterized. But if, either by means of medicines, or the actual cautery, the sloughs have grown callous, there is great danger, that when they cast off, a profusion of blood from the penis may follow; therefore long rest is necessary, and keeping the body almost immoveable, till the sloughs be gently loosened from it in proper time. But if a person, either wittingly, or inadvertently, by walking too soon, has separated the sloughs, and there ensues a hemorrhage, cold water must be applied. If that does not prevail, recourse must be had to those medicines which stop blood. If even these do not relieve, the part must be cauterized carefully and cautiously; and not afterwards exposed to the same danger by any motion whatever."

What follows is yet more immediately applicable to the subject:—" Sometimes also, in the same place, there happens that kind of gangrene, which the Greeks call phagedæna; in which no time is to be lost, but the same remedies must be immediately applied; and if these

are not successful, it must be burnt by the actual cautery. There is likewise a certain *blackness*, which gives no pain, but spreads, and, if we do not resist it, makes its way to the bladder, and cannot be cured afterwards. But if it be at the end of the glans, near the urinary pipe, a small probe should be introduced into that first, to prevent its closing; and then the actual cautery must be applied to the ulcer. But if it has penetrated deep, whatever is tainted must be cut off. For the rest, it must have the same treatment with other gangrenes."

Wiseman, in book ii. chap. x. of his treatise, has the following remarks on this subject:—" *Phagedæna*," says he, "strictly so called, is an ulcer with *swelled lips*, that eats the flesh and neighbouring parts in the bottom and edges of the ulcer. It differs from the *berpes*, because that *always begins in the skin*, with little moisture: *this* always affects the *flesh*, and abounds with matter.

" *Noma* is a deep ulcer, that eats and spreads without tumour, but hath a rottenness and putrefaction joined with it.

“ Both these are venomous malignant ulcers, and both spread: but they differ, in that one hath *tumour, and no putrefaction*; and the other, *putrefaction, and no tumour*.”

Of the symptoms, he observes; “ Some take their original from abscesses deep in the flesh, others begin more shallow, and in time spread and eat not only the skin and flesh, but the parts about, and dissolve the flesh in the bottom of the ulcer very sensibly.”

Concerning the cure, after recommending local applications that are “ cold and dry,” in a sense not intelligible to the modern surgeon, he adds, “ If these answer not expectation, you must proceed with more strong medicaments. But by the authority of the ancients, you must *scarify* these ulcers, or some way provoke them to bleed, that the *sharp humours* may thereby be discharged. Then wash them with some *drying* medicaments, which may also restrain the influx of the humours, as *aqua calcis, æruginôsa, or aluminosa, &c. &c.*”

“ But,” continues he, “ if this ulcer be with *rottenness and putrefaction*, you are to proceed

with detergents, as *unguentum Ægyptiacum*, *mercurius præcipitatus*, *pulvis andronis*, *musæ*, also *caustic*, and *actual cautery*.

“ To these applications, objections have been made ; and, but a little above, medicaments are by myself proposed, *drying without erosion* ; but when these take no place, we proceed to stronger ; and where there is *putrefaction*, you will find use for the strongest sort of medicaments, as the *actual cautery*, it not only serving to remove the *corrosive flesh*, but to check the malignity, and strengthen the weak part. But, in case that will not be admitted of, you must proceed with the other, and the while defend the parts about with *refrigerants* ; and, after separation of the corrupt flesh, treat it by *sarcotics*, and *epulotics*, as hath been elsewhere said.”

To these remarks, in which the author seems to have taken Celsus principally for his model, succeeds a detail of eight cases, or “ observations ;” the two last of which only seem to have been of the phagedænic kind, though he assumes the same of the rest, from their being “ difficult of cure.”—His sixth observation describes the situation of “ A gentleman, of about fifty years

of age, of a lean, *dry* habit of body, labouring under a corrosive ulcer, running from the left side of the upper lip near that nostril, close along the nose, to the great *canthus*, or corner of the eye, penetrating the skin here and there *deeper than elsewhere*: it spread also *without the edges* of the ulcer, making, as it were, a double furrow along the ridge and side of the nose, *superficially in the skin.*"

After reciting the external and internal remedies employed, he proceeds:—"By this method, I dried up the upper ulcer on the side of the nose, but the cicatrices were unseemly, as in most such rebellious ulcers they are; we being glad to dry them in any fashion as we may.—The other ulcers also filled up with flesh, and afterwards cicatrized in some parts. The deepest ulcers were also well-disposed to it."—After some stay in the country, during which, the remedies were persevered in, he returned with "the ulcer much exasperated, and discharging a virulent matter, it having corroded deep the whole length from his upper lip along the cheek into the great canthus, dividing the lower lid of the eye, and was passing between the glandula lachrymalis and the eye: it had also

spread beneath into that nostril, and had passed its matter through; and, in truth, the case was most deplorable." "The topical remedies," he observes, "were only drying medicaments, without acrimony, which agreed well with the ulcer, but served only to *palliate it*. The ulcer spread itself under that eye, fretting the muscles so, that the eye was drawn by the contrary muscles to the external canthus, and distorted so, as it was easy to see the optic nerve."—The author concludes the particulars of this miserable case, by stating, that "The patient was attacked with the same disease on the other side, and, at last, fell a victim to its ravages."—The other case, which seems to fall within the description of phagedænic ulceration, is the following:—

"A gentleman, of about forty years of age, of a sanguine complexion, and plethoric, had an *herpes excedens*, affecting the eyelids. It had been of some years growth. It began on the upper eyelid, near the *cilia*, or edge, in a small pustule, and spread along the edge to the external canthus, where it eat deeper into the skin, and by erosion, caused an ulcer of a round figure, of the breadth of a silver penny, eating into that corner of the *membrana conjunctiva*, and thence the length of the lower eyelid, consuming it down-

wards, leaving the *neighbouring parts scirrous*. Its erosion in these parts was increased by the continual fluxion of the inflamed eye; for the upper lid, where the herpes first arose, was not so much concerned, the original herpes lying there, not unlike a *bordeolum*. Purging, bleeding from the external jugular vein, and issues in the back, were tried, and "*frontals to intercept the descent of humours*;" "but the event of this case, with some occasional abatement and variation, was, by no means, unlike the former, for the patient, retiring into the country, with a supply of the remedies which had *apparently* rendered him service, experienced, nevertheless, so great an increase of the malady, as to lose the affected eye."

The term *cancer*, applied to this disease by Celsus, will not be thought difficult of construction, when it is understood that this is not the only instance of its misapplication by the same writer, who includes erysipelas, and other external ulcerations, which have an unlimited disposition to extend themselves, in the class of cancers. The distinctions he has made of two species of phagedæna, we shall notice hereafter, in tracing Mr. Adams's remarks on that head.

Of the description of phagedæna given by Wiseman, in the preceding extracts, it may not be improper here to observe, that few who have attentively noticed the disease, will admit that it is "an ulcer with swelled lips." In this, however, and his description of *noma*, "which eats and spreads without tumour," and has "a rottenness and putrefaction," attending it, we trace the discriminations of Celsus very evidently.

Of the practice recommended by either of these writers, nothing need be said. The reader will, without difficulty, collect what is material from them; as well as observe what he finds discordant to modern notions respecting the treatment. The disease will, undoubtedly, be best understood by an attention to those well marked cases which stand upon record, and to which it will be sufficient if we refer*.

The distinction of phagedæna into two distinct species is clearly ascertained by Mr. Adams;

* See Hunter's Treatise on the Venereal Disease, part. vii. page 385; Turner on the Venereal Disease, page 248; Edinburgh Medical Essays, vol. i.; and vol. iii. of the London Medical Transactions. These cases are pointed out to our observation by Mr. Adams. For his excellent observations on them, see Treat. Morb. Poisons, page 69, &c.

who, remarking on the passages we have quoted from Celsus, and on the general opinions of that accurate writer, says, "What I particularly wish to remark here is his description and division of phagedæna into *two species*. The first is the common phagedæna, for which he advises the actual cautery. The other he describes as beginning with a *blackness*, or slough, and, if not prevented, spreading to the bladder*, in which stage no assistance can be given. If this is seated on the glans, near the urethra, he advises the same remedy, with proper care to preserve the orifice of the urethra; but if the disease has penetrated deep, that the knife should be used."—The first species is by no means uncommon. Wiseman's cases are in point, as well as the instance related by Dr. Donald Monro, in the London Medical Transactions, but particularly the latter.

The other species of phagedæna, Mr. Adams contends, is only described by Celsus; and he follows up this remark by the recital (p. 70) of a case, at some length, which fell principally

* See the foregoing extracts from Celsus:

under his own management*. In this, the distinction quoted from that venerable writer, is very strongly marked, as Mr. Adams observes, in the following words:—"This case," says he, "in its first stage, is exactly described by Celsus, as the phagedæna, distinguished by *quædam nigrities quæ non sentitur sed serpit*. It was, indeed, seated on the prepuce, and his directions are applicable to the glans, because his principal object in them is the preservation of the urethra. When phagedæna spreads in this manner, it is impossible to say how far the disease may have extended before the loss of substance shews itself. The propriety of the direction, therefore, to *cut beyond* the diseased part [*præcidendum*] in this instance, and to *cauterize* in the other, is easily comprehended."

It is greatly beyond my purpose to enter into Mr. Adams's reasoning on phagedæna of the last species mentioned: neither could it be possi-

* It may not be unnecessary to remark, that Mr. Adams grounds his distinction of the phagedænic from other ulcers, whose limits are more defined, on the circumstance of the "callous edge and base," which exists in the latter, being wanting in the former. To this he attributes the more rapid progress of phagedænic ulceration. See Treatise on Morbid Poisons, p. 96.

ble, within the limits I have prescribed to myself, to do sufficient justice to his ingenuity. The fact, indeed, is, that it is less my object to launch into the depths of any hypothesis, however ingenious, than to make it subservient to practical purposes; and, for this reason, I shall now proceed to consider what by practitioners have been represented as the most beneficial treatment of phagedæna in its different forms.

In our remarks on this part of the subject, it is not a little to be lamented, that we are under the necessity, not only of being concise, but, in a great measure, general; since we know of no system of practice that has been found so uniformly beneficial as to be entitled to exclusive recommendation. There are two views of the subject, however, which it is necessary for us to take. One is of the constitutional, and the other of the local changes, which we should endeavour, by the use of medicine, to produce; and in this, both the species of phagedæna already spoken of are equally concerned.

In the phagedæna producing black sloughs, there can be no doubt, but the bark, and, in most cases, opium should be resorted to; the former

especially, in large and repeated doses, so that the constitution may be invigorated as quickly as possible, and enabled to resist the progress of the ulceration before it becomes so extensive as to destroy the patient. In all endeavours of this kind, the state of the pulse will afford a sufficient criterion; for the disease is, in fact, a species of mortification, differing chiefly from a common sphacelus in its disposition to affect parts not previously inflamed, and spreading rather superficially than to a great depth.

In the local treatment, antiseptic applications, such as the fermenting poultice, are of use; and so is a mixture of equal parts of Venice turpentine and the old compound tincture of myrrh, applied upon lint. Instances have occurred, in which a solution of opium, in the proportion of a drachm to a pint of water, has been of singular service. A specimen of the practice of the old surgeons appears in the treatment recommended by Wiseman, which, proceeding on the now exploded system of the humoral pathology, is generally thought not deserving of attention. In the phagedæna attended "with rottenness and putrefaction," by which is evidently meant that species which we are now con-

sidering, Wiseman's instructions are, in some respects at least, worth our remembering, however their severity may deter us from adopting them. These, as we have already remarked, relate to the application of *detergents*, as ung. *Ægyptiac. merc. præcipit.* &c. also *caustic*, and actual cautery.

If the experience of that writer afforded any sanction to the use of such means, especially of the latter, it is to be supposed, the good effected by them must have arisen from the new action brought on being sufficient to counteract the diseased action, and thus to arrest the progress of the disease; and indeed, where the consequences are of so threatening a nature, there seems no reason why modern practitioners should hesitate even to resort to caustic and actual cautery.

Of the other species of phagedæna, the treatment is endless, in so far as even the most approved of our remedies barely escape the imputation of inefficacy. "As long as the constitution retains its susceptibility, and the pus the property of the poison, the irritating cause will be constantly present, and ulceration or absorption, with purulent discharge, will continue without

interruption, and with such rapidity often, as to prevent the formation of the adhesive lamina*, or to absorb it as fast as it is formed." What remedies then shall we resort to in our attempts to counteract this kind of progress in the *true* phagedænic ulcer?

A remedy much too generally approved, and promiscuously employed by practitioners, is mercury. For an investigation into the phenomena which attend the use of that mineral, surgery is indebted to the author we have so frequently cited in this part of our subject. It has been already said, that an injudicious perseverance in the use of it has, especially in the *crude state* of a wound, in very many instances produced phagedæna.

Notwithstanding this, Mr. Adams concludes :

" That mercury is a remedy we are justified in trying in all cases of ulceration that resist common topical applications, and restorative remedies, particularly if unattended with slough.

* Mr. Hunter describes the *adhesive lamina* as a process which takes place in the formation of an abscess, to prevent the effusion of the matter.—Vide Adams on Morbid Poisons, p. 92.

“ That where ulceration is *unattended with a callous edge and base*, mercury should be exhibited with greater caution, and the *mercurial salts*, for the most part, preferred.

“ That the *secondary ulcers* of some morbid poisons yield to less mercury than their *primary* ones.

“ That, in some instances, where mercury has been freely exhibited before the appearance of secondary ulcers, it has not prevented them. Yet, in these same cases, when secondary ulcers have appeared, they have yielded to a much slighter mercurial irritation than was ineffectually raised to prevent them.

“ That blotches, or ulcers, which appear after the cure of secondary ulcers, seem, in the manner in which they yield to mercury, to bear the same analogy to secondary ulcers, as secondary ones do to primary.

“ And, lastly, that if a primary ulcer, whether of the sloughing or true phagedæna, should, at first, refuse to yield to mercury, we may be justifiable in attempting it a second time, with great caution, either when we conceive the disease kept up by habit, or so far familiarized to the

constitution, that the novelty of the mercurial stimulus may be sufficient to excite a new action, however temporary*.”

Of the “mercurial salts,” there is no preparation so suitable in the treatment of phagedæna, as hydrargyrus muriatus, the effects of which are so far removed from those of quicksilver, in its simpler forms, as to have induced Sir John Pringle to deny it the character of a specific in the venereal lues†.

This circumstance renders it peculiarly eligible where we wish to produce, by internal remedies, a new action in any sore; but even this preparation is to be used, in the cases we are now speaking of, with the greatest circumspection.—

* It is not to be forgotten, that this ingenious writer's view of phagedæna has a principal reference to its occurrence in venereal cases; the general application of his conclusions is, however, very obvious, and I regret that the limits I have proposed to this work, do not admit of my going at length into an analysis of his doctrine. The reader, however, may be gratified by a reference to chap. v. of the Treatise on Morbid Poisons, p. 99.

† Indeed, every surgeon knows how rarely this preparation excites *ptyalism*.

It should be exhibited in very small doses, and diffused in considerable draughts of some kind of fluid, as a decoction of sarsaparilla, guaiacum, mezereon, or cinchona. From an eighth to a quarter of a grain, repeated twice, or, at most, thrice, in the day, I should deem sufficient.

The use of this remedy is sometimes advantageously accompanied with the extracts of cicuta, hyoscyamus, belladonna, &c. which, indeed, seem to be as useful co-operants as any that can be chosen. It frequently happens, however, that the mercurial salts are not merely ineffectual, but pernicious, and that the phagedænic disposition threatens to grow more considerable during their exhibition. The discontinuance of this plan then becomes a matter of course, and in lieu of the muriated quicksilver, it may be advisable to make trial of some of the vitriolated metals, more especially those of iron and zinc, as being less injurious than copper, &c. and, of course, admitting of a more liberal and long continued exhibition. The *ferrum ammoniacale* is also a remedy of great efficacy, and may be given to a very considerable extent*; yet I have found

* Mr. Justamond gave it, in some cases of cancer, in the dose of two drams in a day.—Vide Surgical Tracts, p. 323.

the *tinctura ferri muriati* to the full as effectual when the narcotic vegetable extracts have been given at the same time.

Of *arsenic*, a remedy, it must be confessed, of considerable powers, but dangerous in its exhibition, in almost every form, I shall say little at present; as some general remarks on it will be necessary when we come to speak of the cancerous ulcer, for the treatment of which, it has been thought more particularly applicable. Internally, I know of no preparation of arsenic so little dangerous as that with kali; and externally, none more serviceable than that with antimony; from a very slight application of which, I have occasionally seen a favourable change produced in the action of superficial phagedænic ulcerations.

Some of the remedies used internally are also good as topical applications. We have already mentioned arsenic in this view, but the observation applies yet more closely to the extracts of the narcotic vegetables, especially when combined with some of the neutral salts, as vitriolated magnesia, &c. or with borax, which will now and then be found to answer a good purpose. Muriated quicksilver comes also within the same

description. If dissolved in a few drops of muriatic acid, and afterwards diluted sufficiently with distilled water, it ranks with the best of our topical remedies, not only in the ulcer of which we are treating, but in common ulcers, where a stimulus is wanting.

In the phagedænic ulcer, we often find that the same remedies will succeed best in the form of a poultice. Arsenic may sometimes do more service when applied after this manner, than in the way we have mentioned above. One grain being dissolved in distilled water, and the solution carefully filtered, a cataplasm may be made, by the addition of bread crumbs and linseed meal. It is almost needless to add, that the application must be made to the bare surface of the ulcer, without any intervening dressing of lint, &c. which, however, some surgeons think should never be omitted*. The arsenical poultice will, in all likelihood, give considerable pain, and require to be removed sooner than any common

* This, indeed, is to be regulated according to circumstances; since, as has been observed in speaking of common ulcers, different parts of a sore will sometimes require to be *protected* from the effects of any general application we may use.

application ; but it will often change the action of the fore, and, for a time, at least, produce healthy appearances. Another beneficial kind of poultice, in similar cases, is the *cataplasma effervescens* already spoken of. The carbonic acid, which is gradually extricated from it, and brought into contact with the ulcer, has, in various instances, proved of service. A solution of common soap, formed into a cataplasm, has also its merits; though, like any other remedy the practitioner may adopt, it is not equally useful in all cases.

There are, besides, a variety of topics, which may be used in the form of a powder, with some chance of advantage. Hydrargyrus nitratus ruber, prepared verdigrise, and some of the narcotic vegetables, in a pulverized state, are of this kind. Rhubarb, columba, and squills, though more efficacious in promoting the healing of the common ulcers of long standing, are also worthy of a trial ; for where all is uncertainty, the remotest hope even should be encouraged.

It is to be observed, that in the application of remedies so opposite in their apparent tendency, there is great room for the exercise of the sur-

geon's judgment and discretion. To those phagedænic ulcers, which affect the surface chiefly, "ulceration going on in the surrounding skin, while a new skin forms in the centre, and keeps pace with the ulceration, exhibiting an irregular fore, like a worm-eaten groove, all round," those stimulating topics, which tend to alter the action of parts, may be used with less reserve; while, on the other hand, the treatment of those cases, in which the ulceration is disposed to penetrate, and where a great degree of inflammation, pain, and irritation subsist, must, of course, be managed with greater delicacy. Notwithstanding this, it is to be observed, that the existence of pain and irritation, which frequently seem to be aggravated by mild, relaxing, and more particularly greasy applications, is no reason why sharp remedies should not be made choice of; but rather the contrary, since, in overpowering the diseased action, which may have become habitual in the ulcer, we often exercise the only means of effecting a cure.

In the phagedænic actions, which, in many cases, succeed those of the venereal poison, or rather of the poison of the mercury, almost all the remedies we have named have been occa-

sionally tried. Mr. Hunter, indeed, speaks very fully of them*, and intimates, among other means of treating buboes which have become phagedænic, a practice usual at the Lock Hospital, of applying gold-refiner's water to them.—He also mentions the mezereon as a useful medicine, in some instances, and the copious internal exhibition of the juice of oranges, as recommended by Dr. Fordyce.

Those, indeed, who read with attention that invaluable work in which these hints appear, will anticipate much of the information we have been able to convey, as to the remedies possessing a greater or less share of consequence in the treatment of phagedæna.—For this reason, we shall not extend this part of our subject farther than to remark, that the greatest uncertainty exists as to the effects even of the most reputed of our remedies; and that a patient and persevering trial of each in succession, will often be necessary, before any will be attended with the salutary consequences for which we are anxious.

* Treatise on the Venereal Disease, part v. chap. v.

§ 5. *Of the Cancerous Ulcer.*

THAT kind of ulcer which authors have chosen to distinguish by the appellation of *cancerous*, is a disease very different from that to which the term properly belongs. It is supposed to arise from some existing virus in the constitution, to attack the skin more commonly than any of the deeper seated parts, and to appear in the face more frequently than in any other part of the body. Those who have attempted a description of this ulcer, as distinct from the true cancer, have certainly been misled by the anomalous character which most unmanageable ulcers are apt to assume; and have only used the term *cancerous*, because none more appropriate seemed to present itself; for certainly that disease, which they describe as cancer, can have no pretensions to the name, were it only from the mere circumstance of its being, in many instances, *curable*.

... This kind of ulcer “ is a malignant, corroding sore, upon the skin, the surface of which is glossy and shining, and furnishes an offensive and

ichorous discharge. It partakes of some of the shooting, lancinating, darting pain of the cancer; though not nearly in so great a degree. But the great *distinction* between that and the *true cancer* is, that its *edges* are not *indurated* and *tucked in*, or *inverted*, as those of the true cancer. The true cancer cannot be cured without extirpation; the *cancerous ulcer* very frequently admits of a cure. The latter, now and then, makes its appearance after the venereal chancre, for the corrosive, creeping, and malignant ulcer, that comes on after that complaint, is of this kind."

In these terms has one of the most eminent of the public teachers of the practice of surgery spoken of what has been usually called the cancerous ulcer; but though, in his description of it, there is no deviation from what may be supposed the received opinions on the subject, it is by no means difficult to perceive, that this kind of ulcer has not the remotest alliance to cancer, and certainly has therefore been improperly hitherto considered as a species of carcinoma. Although the pain is described as *lancinating*, like that of cancer, yet two of the strongest characters of the latter disease are wanting, namely, the incurvated, or expanded state of the edges, and the *uniformly fatal* event.

But if any thing farther were necessary to shew the erroneous grounds on which an ulcer that is not a cancer is termed cancerous, it would be found in the concluding lines of the foregoing description, where that species of ulcer which arises from the action of a morbid poison on the penis, and which we have already spoken of in the section on phagedænic ulcer, is confounded with cancer. After stating these reasons, we shall not be expected to accede to a distinction in itself so clearly fallacious; but rather to apply ourselves to the consideration of the true cancer in its ulcerated state; not, it must be confessed, with the vain hope of wholly *preventing its ultimate consequences*; but, at least, with a view of retarding its progress, alleviating its violence, and contributing to render somewhat less irksome the lives of those who are unfortunately the suffering victims of this dreadful malady.

By the term *cancerous ulcer*, then, we mean a cancer in its advanced stage, when the disease ceases to be what is called *occult*.

Of the progressive steps by which this cruel disease advances to that state, we shall here say a few words by way of introduction. When this disease takes place in glandular parts, and parti-

cularly in the breasts of women, a number of hard chords are found to extend themselves in different directions from the principal tumour, To this circumstance, which presents to the imagination the idea of a resemblance to a *crab*, is owing the name by which the earliest writers have distinguished a complaint, for which, indeed, nothing more appropriate can be devised so long as we remain, as at present, so entirely in the dark respecting its true nature.

As these hard chords, which are nothing more than inflamed and hardened absorbent vessels diverging from the principal tumour, were observed by the ancients to occur in other ulcerations than those to which, in our days, the term cancerous is confined, it became common with them to consider as cancers various complaints, which, in the more improved state of surgery among the moderns, were afterwards placed in a very different class.

When a hard tumour, which has existed a long time in the breast, without either diminishing or encreasing, and without giving any pain, begins at length to grow uneasy, to extend gradually in its dimensions, and to be affected

with occasional pungent and *lancinating* pains, there is reason to suspect that it is taking on the cancerous action. This is not, however, invariably the case; since many instances have occurred, where the tumour has fallen into a state of inflammation, and even been attended with that peculiar kind of pain which most of all is to be suspected, and yet the disease has not proved to be of that fatal nature, but the patient has received a certain, though tedious cure. These instances, when they do occur, are eagerly laid hold of by quacks and the venders of nostrums; and are advertised as instances of the efficacy of their plans, which unwary persons, really affected with cancer, are sometimes drawn in to make trial of, at the expence, perhaps, of the only resource which remains for their security.

The lips, the tongue, the face, the penis, and testicles, are the most common situations of cancer in men: in women, it is usually confined to the breasts, the uterus, and the rectum; though, in either sex, any of the soft parts may be attacked by it.

The disease does not put on the same appearance in every instance, but, in common with

some other local affections, is so far influenced by the peculiarity of structure of the part affected, as to exhibit very distinct appearances. These, indeed, have borne so little resemblance in some instances, as to have tempted practitioners to deny that the general term cancer could be strictly applied to them. The cancer of the uterus, at least, has been thought a very fair exception*; and not only that of the rectum, but every carcinomatous affection which begins on the skin, or parts superficially situated, seems clearly distinct from the same disease in the breasts or other secreting glands.

A preceding or preparatory stage of this disease authors have distinguished by the name of *schirrus*. The schirrous state of a gland is that in which the tumour gives no uneasiness, and, in which, the skin does not lose its natural colour. Every indurated and insensible tumour in a gland is, therefore, strictly speaking, a schirrus: the term, however, is never applied to such affections, unless they threaten to terminate in cancer.

* See Adams on Morbid Poisons, p. 177.

There are some diseases which appear to have a salutary effect on the human body, and many which, though injurious, are nevertheless removeable by the efforts of nature herself; but, unhappily, there are some also whose career she seems to have no means of impeding, and which, if not within the reach of our art to remove, prove invariably destructive of human life. Nature herself is, in various instances, sufficient to the removal of indurated tumours of the glands; those, at least, which are *simple* in their nature, and not produced by any inherent or communicated *virus*. In hard tumours of the milk-breast, her exertions may take place without the patient's adverting to them, and may prove successful; yet in some the painful process of suppuration becomes indispensable. Where the latter fails to take place, however, for want of sufficient vigour in the constitution to produce phlegmon, and where the coagulated milk remains unabsorbed for a period, perhaps, of several years, it is natural to suppose, that it will acquire some malignant properties in the end, and that disease will be the consequence. When a hard tumour of this kind subsists, it may or may not lead to consequences of a serious nature. Happily, in far the greatest number of instances, nothing

mischievous occurs: but where any farther morbid change begins to take place, it is materially incumbent on the patient to be watchful, and, if necessary, to set an example of salutary fortitude to others in the same predicament, by submitting even to the most severe method by which a fatal termination may, in almost every instance, be prevented.

Women, who have become mothers, in many successive instances, those especially who have unnaturally withheld their milk from their offspring, are more particularly liable, for obvious reasons, to indurations of the breasts. Those glands being repeatedly called into action by pregnancy and its consequences, are exposed to danger in proportion as the instances are numerous; and, perhaps, there is no means of avoiding the possible bad consequences of a retention of the coagulated milk equal to the natural one of giving suck; a practice, to which it is equally the duty and interest of every mother to conform.

Where these duties, however, have been neglected, and even where they have been strictly performed, (for this disease will happen in either

case, though the chance of it in the former is not, probably, so considerable) an indurated swelling may take place, and remain, perhaps, without alteration till the arrival of that period of life when the breasts (independant of pregnancy) are brought a second time into a state of sympathy with the uterus, namely, when the *menses* are about to be discontinued.

The great caution required at that particular crisis is well known to the sex, and to every medical practitioner; for it is then when some important changes, either of a salutary or morbid tendency, are wrought in the female constitution. Either nature effects her purpose in a lenient and favourable manner, or the latent seeds of some disease are ripened into maturity, and some chronic malady is established, which either cuts short the patient's existence, or makes it painful to her; and happy is she, if Providence avert from her the lingering afflictions of a cancerous affection of the breast or uterus.

With regard to the latter disease, although it forms no part of our plan to treat of it in this place, I cannot help hazarding a conjecture, which I think will not prove wholly unsupported

by facts: some, indeed, have fallen within my own knowledge, sufficiently striking to justify at least, I will not say an opinion on the subject, but a query, which practitioners may answer to themselves as they think proper;—Is there not a probability that the practice of ignorant midwives, of dilating the mouth of the uterus during labour, by which it may fairly be presumed *laceration* sometimes happens, is among the causes which occasion cancer? Whenever this happens, as lacerated parts cannot unite by the first intention, but a sloughing of their whole surface must take place, is it not possible, that, whilst this process is going on at the same time with that of the diminution of the uterus, an irregular cicatrix may be formed, and that cicatrix subject to a new laceration on every subsequent parturition? If these may be answered in the affirmative, it does not appear to me difficult to conceive that such a thickening or morbid alteration of structure in the part may take place, as, in the evening of life, may end in a cancer of the uterus.

To this supposed cause, may we not also add the retention, which it is possible may occur, of some small portion of the membranes? For though the lochia are evidently designed by

nature to wash away whatever, by being retained, may, one time or other, become capable of acting as a virus on the part, we well know that these salutary discharges are, in many instances, very sparingly produced; and they may, of course, be insufficient to the proposed end.— That the long retention or confinement, in any part of the body, of any excretion or excrementitious substance which nature designed to expel from the body, may render such substance a poison to the animal, is not difficult to imagine. I am aware, indeed, that some facts may be adduced that appear to militate strongly against this supposition. Among these, the powers of the constitution in removing large extravasation of blood, and of absorbing aneurismal tumours, rank foremost. The cases on record, of extra-uterine gestation, also shew to what an extraordinary length nature will extend her efforts to prevent the evil which must otherwise result from her own deviations*. But it is not in these extensive instances that I conceive the possibility of future mischief to exist. Where blood (which,

* My friend, Dr. Cheston, is in possession of an extra-uterine foetus, which, with the investing membranes, became completely ossified, during its retention in the abdomen of the mother for a period of *forty* years!

by the way, possessing *life* in itself, and being also capable of *organization*, is, on those accounts, hardly a proper subject of comparison in the present case) is diffused in such quantity as to be beyond the power of the surrounding absorbents to dispose of, its qualities degenerate; and some, at least, of the changes, which blood would undergo if placed in the same degree of heat out of the body, take place, and an abscess is occasioned by the irritating quality it has acquired in its confinement.

Now if blood, the fluid most congenial, as has just been observed, to the animal solids, is capable of producing, comparatively, in so short a period, an injurious effect upon them, is it any thing improbable, that a minute quantity of any fluid originally inactive, yet capable of a more deleterious change, after being retained till that period when the declining powers of the constitution no longer are capable of resisting its effects, should establish a disease destructive of the part on which it is situated? It will be said, perhaps, that this reasoning does not apply to the *solid* substance which I have introduced within the sphere of this general conjecture, as to the possible causes of cancerated uterus. But the ob-

jection is easily answered, since the natural change of a solid animal substance, retained under such circumstances as I have supposed, is a change (slowly performed, it may be admitted) from a solid to a *fluid* state; yet, if the contrary were the case, I do not see that any opposite conclusion would result.

That animal bodies are capable of producing poisons that will act with some severity on the bodies of others, of the same species, a late writer has, I think, indisputably shewn*. That our own bodies are capable of generating poisons capable not only of temporary, but permanent mischief to ourselves, I also conceive may be justly suspected. I shall not, however, pursue this digression any farther, though it will, probably, occupy me on some future occasion.

When a scirrhus tumour has advanced to a cancerous state, the hardened substance takes on some degree of irregularity; and not only becomes more or less attached to the part on which it grows, but advances, in a certain degree, towards the skin, which, even whilst lax, partici-

* Vide Adams on Morbid Poisons.

pates in the disease, and forms a kind of tucking in, or fissure. At this part the alteration commonly begins, which gives the disease the name of an *open* (in opposition to the term *occult*) cancer; and from this breaking kind of state, it gradually proceeds to such a process of ulceration, and consequent discharge of matter, as calls for the daily renewal of some kind of external dressing.

It is not uncommon with practitioners who have few opportunities of marking the progressive steps by which the cancerous ulcer is established, to consider as such other kinds of ulceration, (particularly of glandular parts) which have a strong degree of malignity in themselves, and have also resembled cancer in their spontaneous beginning, their slow progress, and the pain they have been attended with. Hence we see the importance, not only of obtaining from the patient an accurate and circumstantial history of the complaint, but also of being able to distinguish which of his symptoms are, and which are not, fairly referable to causes of a cancerous nature.

It is not in every case, however, that the progress of a cancerous affection is slow; for, at

though in the generality of instances, a period of some years elapses before it passes through its preparatory stages, in some habits the disease becomes compleat even in the course of a few months. In such cases, there are successive and violent attacks of local inflammation, and the constitution also suffers by a corresponding degree of fever; each apparently acting in succession as cause and effect: for it is by no means uncommon to find the fever preceding the renewal of the local inflammation. That the system is very materially concerned in cancerous affections, is evident from the loose texture of the blood which has been found to prevail in persons predisposed to it. On this principle, perhaps, we may account for the disposition to hemorrhage so prevalent in the open state of cancer, and likewise for the extraordinary acrimony, corrosiveness, and peculiar foetor of the discharge.

A considerable discharge of this kind generally takes place even before the ulceration can be said to have any extent of flat surface. Dr. Adair Crawford, in the *Philosophical Transactions*, vol. 80, page 391, has given an account of some experiments, made with a view to detect, by chemical agency, the nature of cancerous

virus; and I shall here concisely mention their result.—It appears,

“ 1. That the appearance of a powerful *volatile alkali* is detected in the discharge.

“ 2. That with this alkali, there is united an *aërial fluid*, possessing the chief properties of *hepatic air*.

“ 3. That by the combination of these principles, a sort of *hepatised ammonia* is formed, on which the *deleterious nature* of the matter depends.” A “peculiar offensive foetor” in the discharge; “the swelling of the contiguous lymphatic glands;” and, lastly, “the corrosion of vessels;” are indications of the existence of the real cancerous poison; and so great are its powers of corroding, that they act not only on the animal fibre, but even on metals. The celebrated Van Swieten alledges, that he has seen the texture of linen rags as completely destroyed by it as if they had been moistened with nitrous acid; it is not very usual, however, to witness these effects in common cases.

The experiments of Dr. Crawford on this interesting subject, naturally led him to some

conjectures as to the remedy which should be employed to counteract the cancerous virus.— Of this we shall concisely take notice in the course of what we have to observe on the treatment; and to render that part of the subject more explicit, it will not be amiss to recur to the precise definition of what we consider* as the true cancerous ulcer, and what alone ought to go by that name.

“ A *cancerous ulcer* is attended with a constant sense of ardent pain: it is irregular in its figure, and commonly presents an unequal surface; it discharges a fœtid, sanious, and fetid matter: the edges of the sore are thick, indurated, and often exquisitely painful; they are sometimes inverted, at other times retorted, and often exhibit a serrated appearance. The ulcer, in its progress, is frequently attended with hæmorrhages, in consequence of the erosion of blood vessels.”

As the disease, when arrived at the state here described, can only be successfully combated

* With Mr. Pearson.—See his *Practical Observations on Cancerous Complaints*, p. 78.

through the medium of the constitution; and as none of the many remedies proposed have, on trial, been found to merit our confidence, it would be a waste of time even to enumerate them; we shall, therefore, dwell principally on the local treatment, from which we may hope to procure for the patient some temporary advantages at least.

Our object, then, will be:—1st, To alleviate the violence of the pain:—2dly, To amend the discharge, or, at least, correct its fetor:—3dly, To retard the extension of the ulcer:—4thly, To restrain occasional hemorrhages, and prevent their debilitating the system. Let us consider these subjects in the order in which they stand.

1. The remedies capable of alleviating the violence of the pain, are both internal and local. Of the former, not only opium, but most of the inferior narcotics, have been variously administered with considerable temporary effect. It is expedient, indeed, at almost all events, to carry the use of these remedies as far as the immediate safety of the patient will admit; not forgetting, that, in the alleviation of pain, is, perhaps, involved the prolongation of life; for debility, the

gradual increase of which marks the progress of cancer to its fatal termination, is greatly increased by long continued and violent pain.

It is to this property alone in the different narcotic vegetables, that many practitioners attribute their supposed virtue in cancerous diseases. Pain not only abstractly, but relatively, impairs the body. Its stimulus is not merely attended with direct morbid consequences, but tends also indirectly to the patient's injury, by destroying the appetite, and producing the most afflicting state of mental dejection.

It would be a reproach to any one in the least conversant with medical affairs, to enter at any length on the mode in which hemlock, and other vegetables of the same class, require to be exhibited; I shall, therefore, pass over the subject simply by enumerating them, and afterwards speak of the local applications best calculated to diminish pain. The narcotic vegetables, exclusive of opium, are *cicuta**, *aconitum*, *hyosciamus*,

* " On the medicinal properties of hemlock, a great diversity of opinions have been maintained; and for this there is a mode of accounting, of which few, perhaps, are aware.

" According

and *belledonna*†. Extracts from them, accurately prepared, may be administered, from small beginnings to a dose sufficiently considerable to blunt the feelings of the patient, and render the pain of a cancerous ulcer very trifling, in many

“ According to some writers, but more particularly Dr. Withering, *there are several ways in which the views of a medical practitioner, in prescribing this remedy, may be frustrated.* The plant chosen for preparing the extract may not be the true *conium maculatum*, which is distinguished by red spots along the stalk. It may not be gathered when in perfection, namely, when beginning to flower. The inspissation of the juice may not have been performed in a water-bath, but, for the sake of dispatch, over a common fire. The leaves, of which the powder is made, may not have been cautiously dried, and preserved in a well-stopped bottle; or if so, may still not have been guarded from the ill effects of exposure to the light. Or, lastly, the whole medicine may have suffered from the mere effects of long keeping. From any of these causes, it is evident, the powers of *cicuta* may have suffered; and it happens, no doubt, very frequently, that the failure of it ought, in fact, to be attributed to one or other of them.”—PHARM. CHIRURG. 3d ed. p. 113.

† To this list a late writer has added the distilled water of *lauro-cerassus*, and *nux vomica*. He has, however, done little more than name these remedies. The former, it seems, was tried without success by Professor Richter, of Gottingen; yet whilst the effects of it on the human body remain unascertained, a farther trial, it is to be hoped, will be made of it, not only in this, but other diseases, for which, at present, no means of cure are known.

instances, and, in some, with evident advantage to the ulcer itself.

The external remedies to be had recourse to in these cases, are much more various. They consist, chiefly, of two descriptions, to wit, the emollient, and the sedative; and their modes of application admit likewise of being considerably varied. Besides employing strong infusions of the narcotic vegetables already mentioned, either in the form of fomentation and poultice, or by plegits of lint dipped into them, we may add to the list an infusion of tobacco, a plant possessing, perhaps, the most powerful sedative virtues of any that have been named. Emollient remedies that are simply such, are less worthy of our choice than those last mentioned, which answer both intentions.

Where the use of fomentations and poultices happens to be ineligible, great ease may be procured by sprinkling the ulcer copiously with a fine powder of the leaves of cicuta. Sometimes the farina of malt alone will have the same effect; and the use of remedies in this particular form has this great advantage, that they absorb the acrimonious discharge, and thereby prevent

much pain, which, from that cause alone, would be felt by the patient.

On some occasions, it has been said, a solution of assa-foetida has been found not only to give ease, but to benefit the ulcer. * The same may be said of cold-drawn linseed oil, in which a small portion of camphor is dissolved. Other practitioners have recourse to thick solutions of the narcotic extracts; joining with them a due proportion of sal sedativum. Where any of these are tried, the mode of application is by plegits of lint dipped into the mixture, and renewed according to circumstances.

But a remedy capable of affording much relief, not only in this, but almost in every view, is the application of a blister at some little distance from the ulcer. Where the pain occurs in a violent degree, it is generally brought on by some fresh attack of inflammation, and the blister, by exciting a powerful stimulus in its neighbourhood, will frequently have the effect, common to the same remedy in other cases, of drawing off inflammation, and consequently the pain.

2. Of remedies which are calculated to amend the discharge, and correct *its fator*, the number,

correctly speaking, is very limited. They all consist of substances possessing antiseptic qualities; such as poultices prepared of turnips, carrots, &c. boiled and mashed; the effervescing cataplasma*; or, what is best of all, *carbonic acid* vapour, (fixed air,) applied by an apparatus similar to that lately recommended, with a curative intention, by Dr. Ewart†.

The bruised leaves of fresh hemlock are also serviceable in this view; as is, likewise, the solution of camphor in linseed oil, mentioned above. Some have tried decoctions of astringent vegetables, particularly cinchona.

It is here proper to mention the chemical preparation that Dr. Crawford conceived most likely to destroy the cancerous virus, which he had found to consist in an *hepatised ammonia*.—"His hopes," says Dr. Nisbet, "were chiefly founded on the *oxygenated muriatic acid*, diluted with thrice its weight of water, which, by this dilution, gives little pain to cases that are not highly irritable. In some instances, he found that it *corrected the fætor*, and *amended the dis-*

* Cataplasma effervescens of the Pharm. Chirurg.

† See his account of cases treated by him at Bath.

Solution of Opium in Spirit of Astor

charge; but its good effects were by no means uniform, for it failed entirely in many others.— Its operation is still, therefore, a matter of equal uncertainty with most other applications in this disease. How far this acid is to be ventured on internally is to be doubted; and also, if used internally, whether it would produce any stronger effect than any other simple acid.”

Though there cannot be a doubt but these objections are well founded, as far as relates to the internal use of oxygenated muriatic acid, it may, nevertheless, as an external application, answer the end, to a certain extent, of correcting the fœtor, which is extremely offensive to the patient, and even injurious, since the effluvia entering the lungs along with the atmospheric air, greatly injures the purity of the latter.

3. To *retard the extension of the ulcer*, is, perhaps, a task of little less difficulty than to effect its diminution; and must consist in an union of the means which we propose to point out as requisite to the several indications. To retard the progress of a disease, we must adopt all the methods that have a tendency towards its cure; and therefore, in the instance before us, we are

called upon to employ not only external, but internal remedies, and also to attend to diet, exercise*, and every circumstance by which vigour may be imparted to the constitution, and the general health of the body maintained.

Of the internal remedies most beneficial to a cancerous ulcer, and which have not been already taken in another view, there remain only two to which the smallest efficacy can be justly attributed; and, unhappily, we are almost wholly precluded from the use of one of them, by the danger which invariably attends its exhibition. The two remedies I speak of are arsenic and iron. Of the effects of the former we have very copious accounts in the writings of the late Mr. Justamond, and many others. These are sufficient almost to prohibit the use of arsenic entirely in any case; yet as some may be of a different opinion, I will, at least, here point out a preparation of it certainly liable to fewer objections than any other; I mean that used at St. Bartholomew's Hospital, under the name of *kali arsenicatum*†.

* A kind of exercise very suitable for persons emaciated by a painful disease like cancer is *swinging*.

† Vide Pharm. Nosscomii, St. Barthol. or Pharm. Chirurg.

With regard to the use of iron, it may truly be said, that it has a very considerable effect in supporting the system, and lessening debility; and it will even produce very flattering appearances in some cancerous sores, more especially those of the face. The author last quoted has detailed very much at length the result of his trials of that preparation, called *ferrum ammoniacale**: it is, of course, superfluous to enter upon the subject here; yet it is necessary, perhaps, to mention his having also employed a spirituous preparation of the same metal† as a *topic*, and, in many cases, with the evident effect of *retarding the extension of the cancerous ulcer*.

This preparation, made according to a German recipe, was unnecessarily elaborate; and, except in point of cleanliness of application, possessed no advantage over the *tinctura ferri muriati*, which Mr. Justamond afterwards employed as a substitute. This tincture is recommended to be applied with a camel's hair brush upon the

* See the Treatise on Cancerous Diseases, in Justamond's Surgical Tracts, 4to. page 322.

† Ibid, page 364.

thick curling edges of the sore, and to some little distance around it; dressing the ulcer itself with any other remedy that the state of it might seem to require.

Among the means of retarding the progress of the ulcer, we may also very properly reckon the occasional application of blisters, in the manner already mentioned; and also the use of the *arsenical caustic**, from time to time, to such parts of the ulcer, or of its edges, as are particularly ill-conditioned.

It must be admitted, indeed, that the use of active caustics, as a means of *retarding a cancerous ulcer*, should be adopted with great circumspection. Whatever creates active inflammation, spreads the cancerous poison in an equal proportion; and unless we can qualify our applications in such a way as to destroy *without inflaming*, (which cannot but be a difficult, if not an impossible task,) we shall run some risque, not only of adding to the patient's present sufferings, but also of spreading the mischief to parts not before affected by the disease.

* Ibid, page 352.

In many common ulcers, however, and sometimes in the cancerous ulcer, there exist parts which, possessing less of life than the surrounding substance, may be destroyed by a prudent management of the caustic, without producing much irritation. There is some difficulty too in the applications we may select for this purpose; and we have also the means of qualifying them by the mixture of other substances capable of adding to that disposition in certain parts of the ulcer, which we have described as favourable to the insensible operation of a caustic. These substances are not merely such as weaken its powers in proportion as they extend its bulk, but such as act specifically on the animal fibre, and by diminishing its life yet more considerably than before, render it a prey to the escarotic properties of the composition, with only a slight degree of inconvenience to the patient.

The caustic most adviseable in this view, therefore, is a mixture of certain proportions of antimoniated arsenic*, opium, and camphor, the proportions being regulated according to the degree of irritability and sensibility existing in the

* *Arsenicum antimoniatum* of the Pharm. Chirurg.

part destined for its action. The additions to the caustic should, at least, be equal to two-thirds of the bulk of the whole; and the proportion of opium should be about double that of the camphor: but all these circumstances must be matter of discretion with the practitioner, as must also the extent of surface to be attacked, the intervals to be allowed between each successive application of the caustic, &c.

We shall close this part of our subject by shortly remarking, that, among the remedies which have been suggested for the improvement of cancerous ulcers, the internal use of the juice of the well known plant, called *goose-grass*, is not unworthy of a trial. It should, however, be given to some extent, and continued for a considerable time, before any favourable effects are to be expected*.

* The reader will, probably, have expected, that in the enumeration of remedies worthy of a trial in the cancerous ulcer, the *hemlock bath* would not be forgotten; but as its use is mostly confined to the cancer of the *u erus*, and as the specific effect of the hemlock is not more considerable in this way than when taken into the stomach, it appeared to be unnecessary to make mention of it. Those who are curious to see the result of many trials of the hemlock bath, may be gratified by consulting Mr. Justamond's Treatise already referred to.

4. The last object of our enquiry is after the means of *restraining hemorrhages* from the cancerous ulcer; and this may be included in a very few remarks. When a cancerous ulcer is greatly advanced, and the matter it discharges is highly corrosive, the ulceration is not confined to the muscular fibres of the part, but preys also upon the blood-vessels, and every other substance in its way.

In cancers, as well as in most other local diseases in which an unusual quantity of blood is derived to the part, both the arteries and veins become considerably enlarged. Even the veins, when their coats are corroded, will give vent to considerable quantities of blood; but when a branch of an artery is partially destroyed, the hemorrhage becomes far more serious; and it very often happens, that a repetition of bleeding from this cause, joined to the pre-existing constitutional debility, carries off the patient. Nor need we wonder at this: the artery thus affected, being buried in a diseased mass, cannot be secured by an operation, as in common cases; while, on the other hand, its being *partially*, not wholly, divided, prevents the usual natural cure of hemorrhage from small arteries by spontaneous contraction. Its situation admits not of

pressure, which, indeed, the indurated state of the surrounding parts would tend greatly to defeat, even if a bandage and compress could be applied. Our chief resource then, though a poor one, is the application of *styptics*: but the patient's life is at stake, and we must attempt *something*.

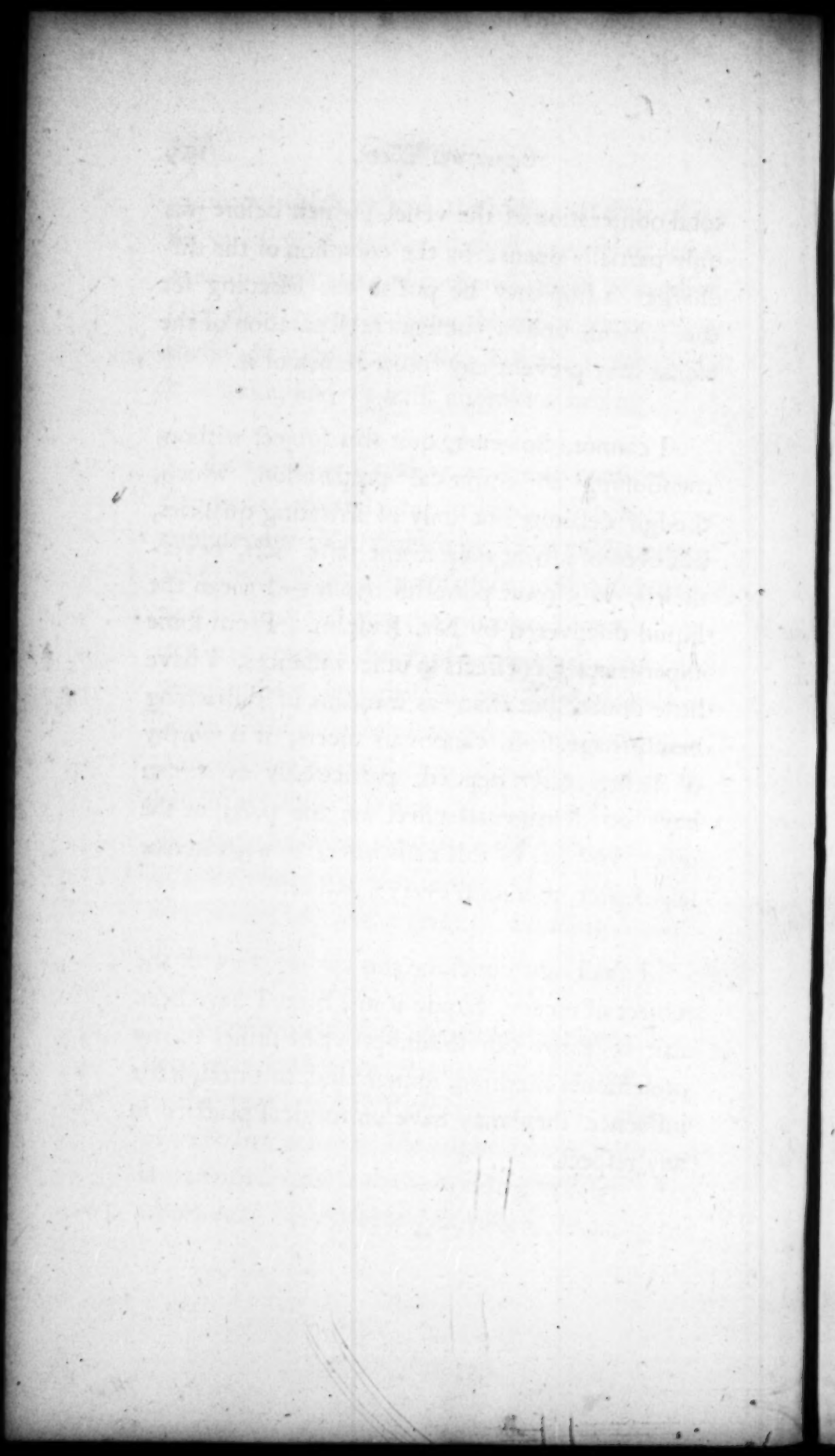
In applying styptics, we are to consider that the most powerful are, in general, such as give considerable pain, and excite, what to the utmost we should avoid, inflammation. Of this description we may instance the vitriolated metals, particularly copper, spirit of turpentine, alum, and many others included in our dispensatories.—Some are of a milder description, but, unhappily, their efficacy diminishes in proportion as they are less stimulating. It is right that we should try the latter, however, and recur to the former only in cases where the hemorrhage demands a lesser inconvenience, as the price of avoiding a considerable evil.

Some very profuse bleedings, it appears, have been restrained by the application of pounded ice to the part; but in those which call for the use of a decisive remedy, the application of a little of the arsenical caustic to the bleeding vessel, is a step which may very properly be taken, since, by the

total obliteration of the vessel, (which before was only partially opened by the corrosion of the discharge) a stop may be put to the bleeding for the present, and a subsequent separation of the eschar may prevent any future return of it.

I cannot, however, quit this subject without mentioning an empirical preparation, which, though destitute not only of irritating qualities, but even of astringency to the taste, acts, nevertheless, as a most powerful *styptic*.—I mean the liquid discovered by Mr. Ruspini. From some experience of its effects in other instances, I have little doubt, but that, as a means of restraining hemorrhage from cancerous ulcers, it is worthy of being recommended, particularly as it can have no detrimental effect on the part, as the other remedies of this class have, in a greater or less degree, in almost every instance.

I shall now conclude this cursory view of the subject of ulcers; happy if any hints I have been able to throw out should prove of utility to my professional brethren, to mankind, or through the influence they may have on surgical practice in any respect.



APPENDIX.

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APPENDIX

APPENDIX.

*On the mode of treating Ulcers by the mechanical
concentration of the surrounding skin.*

SINCE the foregoing pages were prepared for publication, I have had the satisfaction of perusing a treatise, written by Mr. Baynton, an eminent surgeon at Bristol, on a *new method* of treating ulcers, which, whether it may or may not prove generally successful, is marked with a strong feature of ingenuity, and reflects great credit on its inventor.

On perusing that work, I was almost led to apprehend, that any remarks of mine on the treatment of ulcers, by the *common means*,

would be superfluous; and that this opprobrium of surgery was now about to be removed. I heartily wish that had been really the case, and that my experience of the good effects resulting from the excellent mode of treatment recommended, would enable me to speak of it in terms as sanguine as he has done. But though I must join with others (and glad am I to do so) in considering Mr. Baynton's discovery among *the most important* that has ever occurred on the same subject, I am still justified by experience in hesitating to admit its claim to *uniformity of success*, even in the *fairest* cases that can occur for the experiment.

After what has been alleged by Mr. Baynton on this singular mode of attempting the cure of ulcers; after the testimonies in its favour produced by others; and after what, in candour, I must allow to be an *ample share* of success in the application of adhesive flaps, in various cases that have been placed under my care at the Infirmary; I should deem this little publication extremely imperfect, if I did not give my readers a sufficient account of the process to enable them to make the experiment; and this I cannot do in more adequate language than has been used by its

author, who says :—" The parts should be first cleared of the hair, sometimes found in considerable quantities upon the legs, by means of a razor, that none of the discharges, by being retained, may become acrid, and inflame the skin, and that the dressings may be removed with ease at each time of their renewal, which, in some cases, where the discharges are very profuse, and the ulcers very irritable, may, perhaps, be necessary twice in the twenty-four hours, but which I have, in every instance, been only under the necessity of performing once in that space of time.

" The plaster should be prepared by slowly melting in an iron ladle a sufficient quantity of litharge plaster or diachylon, which, if too brittle, when cold, to adhere, may be rendered adhesive by melting half a drachm of resin with every ounce of the plaster; when melted it should be stirred till it begins to cool, and then spread thinly upon slips of smooth porous calico, of a convenient length and breadth, by sweeping it quickly from the end, held by the left hand of the person who spreads it, to the other, held firmly by another person, with the common elastic spatula used by apothecaries; the uneven edges must be taken off, and the pieces cut into slips,

about two inches in breadth, and of a length that will, after being passed round the limb, leave an end of about four or five inches. The middle of the piece, so prepared, is to be applied to the sound part of the limb, opposite to the inferior part of the ulcer, so that the lower edge of the plaster may be placed about an inch below the lower edge of the sore, and the ends drawn over the ulcer with as much gradual extension as the patient can well bear; other slips are to be secured in the same way, each above and in contact with the other, until the whole surface of the sore and the limb are completely covered, at least one inch below and two or three above the diseased part.

“ The whole of the leg should then be equally defended with pieces of soft calico, three or four times doubled, and a bandage of the same, about three inches in breadth, and four or five yards in length, or rather, as much as will be sufficient to support the limb from the toes to the knee, should be applied as smoothly as can be possibly performed by the surgeon, and with as much firmness as can be borne by the patient, being passed first round the leg, at the ankle joint, then as many times round the foot as will cover

and support every part of it, except the toes, and afterwards up the limb till it reaches the knee, observing that each turn of the bandage should have its lower edge so placed as to be about an inch above the lower edge of the fold next below.

“ If the parts be much inflamed, or the discharges very profuse, they should be well moistened, and kept cool with cold spring water poured upon them as often as the heat may indicate to be necessary, or, perhaps, at least, once every hour. The patient may take what exercise he pleases, and it will be always found that an alleviation of his pain and the promotion of his cure will follow as its consequence, though under other modes of treating the disease it aggravates the pain, and prevents the cure.

“ These means, when it can be made convenient, should be applied soon after rising in the morning, as the legs of persons affected with this disease are then found most free from tumefaction, and the advantages will be greater than when they are applied to limbs in a swollen state. But at whatever time the applications be made, or in whatever condition the parts be found, I

believe it will always happen, that cures may be obtained by these means alone, except in one species of the disease, which seldom occurs, but that will hereafter be described. The first application will sometimes occasion pain, which, however, subsides in a short time, and is felt less sensibly at every succeeding dressing. The force with which the ends are drawn over the limb must then be gradually increased, and when the parts are restored to their natural state of ease and sensibility, which will soon happen, as much may be applied as the calico will bear, or the surgeon can exert; especially if the limb be in that enlarged and incompressible state which has been denominated the scorbutic, or if the edges of the wound be widely separated from each other."

... The author next observes, on a circumstance, which, with me, I own, has proved very troublesome, namely, the breaking of the skin in the vicinity of the sores; owing partly to the mechanical effect of the adhesive slips, and partly to the irritating quality of the plaster. He considers these sores of consequence only when lying over the tendon Achilles, in which situation they sometimes require "the care of many weeks,"

and to guard against which, he recommends the intervention of a small shred of soft leather before the slip of plaster is applied.

“ It may be necessary to add,” continues Mr. B. “ that cures will be generally obtained without difficulty, by the mere application of the slips and bandage; but when the parts are much inflamed, and the secretions great, or the season hot, the frequent application of cold water will be found a valuable auxiliary, and may be always safely had recourse to where the heat of the parts is greater than is natural, and the body free from perspiration.”

I cannot help observing, on the auxiliary remedy here suggested, that I conceive it to be one of almost equal importance with the principal.— Having been long in the habit of directing lotions of various kinds to be applied through the bandage, I can bear testimony to the benefits arising from that practice in the common treatment of ulcerated legs, and I have no doubt the principal agents in these cases were cold and moisture, both which are as capable of being afforded by water alone, as by the addition to it of medicinal ingredients.

With regard to the bandage, in chusing the materials for which, I have, without knowing Mr. Baynton's opinion, happened exactly to coincide with him, I shall only observe, that I have found myself more at liberty to accommodate the use of the slips to the feelings of the patient (which are generally very much excited on their first application) by a nine-tailed bandage, at the same time applying to the fore as much dry lint as is necessary to absorb the discharge, and, in some cases, an elastic flannel bandage over all.

As I shall conclude these remarks with an opinion somewhat different from Mr. Baynton's, as to the *modus operandi* of his invention, and also as a just knowledge of its principles may tend to impress the minds of practitioners in general with an adequate idea of its real importance, I shall here give the author's theory, as stated by himself:—

“Various opinions,” says he, “concerning its *mode* of operation have been suggested by different learned and ingenious men, since the publication of the former edition of this treatise; but as none have come to my knowledge more satisfactory than those I have adopted, I shall attempt

to explain them in this place. To do so, even in the limited way I mean to allow myself, it will be necessary to take a view of the operations of nature in her endeavours to accomplish cures *where parts have been merely divided*. And also *where loss of substance having been experienced*, the edges of the divided parts have been kept afunder a sufficient length of time to occasion their death from defect of circulation. In the former case, where parts have been merely divided, re-union is accomplished, either by the effused fluids acquiring vascularity, or (if the parts be brought into contact) by the inosculation of the old vessels. In the latter instances, that is, where loss of substance has happened, and where the death of the edges and surfaces of the divided parts has occurred, the first step must be the removal of those dead parts, which is effected by an absorption of the extremities of the sound parts in contact with them, and, perhaps, some portion of those dead parts also; this constitutes the ulcerative process, and is attended with purulent discharge. The living parts being thus freed from their incumbrances, the next action to be performed is the secretion of healthy matter, or pus, which is also a preliminary act to the formation of granulations, and proves their rudiment,

as the formation of granulations is the act which precedes the process of skinning. These actions are generally performed without difficulty in a healthy state of the constitution and of the parts. But where the constitution is so diseased by a poison as to occasion diseased actions in the parts; or where the parts themselves have their healthy actions disturbed by the irritation of foreign bodies, or poisons, the ulcerative process is continued. In like manner, when ulcers on the legs of the poor are neglected in their early stages, the ulcerative process becomes habitual, and is generally continued to the end of their lives.— The first *mistake* committed by such persons is their omitting to support the parts with proper bandages; the next, the disturbance of the process of granulating, by too frequently wiping away the matter designed to furnish granulations, or the application of injurious substances in lieu of that mild material; the consequence of such omission and improper interference is again the death of the surface of the sores, again the necessity of their removal by absorption, and again the renewal of that process whereby pus is furnished for the production of granulations. This round of actions, performed by parts situated at a distance from the heart, and destined to return

fluids through long tubes, in a direction contrary to their gravity, and depending, perhaps, upon the healthy performance of all their actions, for the healthy performance of each individual action is generally attended with inflammation, and as its consequence, the parts are supplied with a larger quantity of blood than was furnished in a state of health; this, under the peculiar circumstances of the arteries, will occasion a greater deposition of lymph between the interstices of the muscles and the cells of the cellular membrane than is necessary for their lubrication, or than the absorbents can carry away; which, gradually increasing, will remove the absorbents from their vicinity to the arteries, and, consequently, occasion a loss to them of the effect of arterial impulse, which, while the vascular system of the limb continues in a perfect state, may be supposed to have considerable effect in propelling the returning lymph, as the lymphatic vessels are plentifully supplied with valves; therefore I conclude, that the principal difficulty which occurred in the curing of ulcers, has been occasioned by deficiency of power in the absorbent vessels; and it appears certain, that such deficiency of power is a consequence of that diseased state of the common integuments of the

limb, which failed to preserve the parts in a natural situation, and to render them subservient to each other's natural actions. The methods which have proved most successful in the treatment of this disease appear to strengthen this conjecture, as well as the circumstance of cures having been found difficult to obtain, in proportion to the length of the continuance of the complaint, and the consequent disease of the enveloping membranes. This difficulty has been always increased by perpendicular, and other positions unfavourable to the transmission of fluids: and those cases have always proved the most difficult to cure which have afforded the strongest evidence of the absorbent system being in a diseased and weakened condition, namely, those attended with an incompressible and greatly thickened state of the limb, in consequence of interstitial deposition; and those attended with a varicose state of the veins: whereas, on the contrary, those having generally proved easiest to cure which, being recent, and remaining free from tumefaction, have afforded a probability of the healthy state of that system of vessels. If this theory of the disease, and of the effects of its remedy, be admitted, we shall be no longer at a loss to account for the success which attends an

application of these means; whether applied to recent ulcers, where parts are merely retracted, and where it is only necessary to bring them into contact to obtain cures by inosculation, which is the most desirable event, as it saves time, and enables us to arm the part with its original shield; or, whether loss of substance has been sustained, and the edges and surfaces of the ulcers have been kept so long asunder as to occasion their death, and at length the habitual repetition of the ulcerative process; or, whether cures have been prevented by the inactivity of the absorbents, as happens to the ulcers of aged people, attended with thickened edges.

“ In recent ulcers, it forms an uniting bandage, which enables us immediately to approximate retracted parts, and affords a temporary substitute for the healthy integuments, not liable to the inconveniencies incident to those when weakened by a long continued course of disease. When it is applied so as to afford support to the whole of the diseased limb, persons may walk great distances, or even indulge in irregularities, without obstructing their cures, as it subjects every part to the effects of the natural actions of the contiguous parts, and assists essentially the in-

dividual actions of each part concerned in the business of repair; and whether slough is to be removed, pus to be secreted, granulations to be formed, or skin to be re-produced, it happens that each of these actions commences and proceeds in the natural order of their succession, whether the disease be recent, or in that state of habitual ulceration which has been termed the irritable; or whether, after long continuance, and the expenditure of the powers of the parts, it has fallen into a state of inactivity, and acquired the characteristic of deficient absorption, the callous edge."

My objection to the theory here produced is, that it does not appear to me to correspond with the practice; nor do I see, admitting the disease to arise from a "deficiency of power in the absorbent vessels," how the drawing of the skin, by mechanical means, from the circumference towards the centre of an ulcer, can at all contribute to restore their functions. Neither, indeed, does it appear to me to have been explained by Mr. Baynton, how, by the use of his method, that "diseased state of the common integuments of the limb," from which the defective absorption arises, can admit of a remedy in the way he

supposes. Let it be observed, that I am not questioning the fact, but the explanation of it, which, I must say, I think is by no means competent.

With submission to the opinions of the author, and of those by whose communications he has profited, I will venture the following loose conjectures on this subject.—I believe with Mr. B. that the chief seat of an ulcer is the common integuments, which, being composed of soft and yielding materials in a healthy state, are affected by every motion of the limb. The means most conducive to the cure of an ulcer, after the old practice, it is well known have been those which, premising certain applications to the surface, have most completely *prevented motion in the ulcerated part*. I do not mean progressive, but relative, motion; not motion as it relates to the leg, but to the ulcer upon it, and to every part directly connected with its surface.

Whatever be the process by which nature restores to health those parts which have been ulcerated, it is evident she requires a suspension of all active exertion, before her efforts to perform it can be successful. She does not, indeed,

require that the whole machine should cease to act because an inconsiderable part of it has been impaired, but she certainly requires, that, instead of being put upon the stretch by the accustomed motions of the body, the injured parts, namely, the skin and common integuments, should be left at leisure for her operations. It is only the want of this state of rest that causes a slight scratch to become a considerable ulcer; for if the patient's condition in life allow him to avoid walking, no artificial treatment is necessary to obtain a cure. If the motion of the body, producing an injurious attrition of the parts of an ulcer, were not the principal cause of its extension, why have we ulcers of a particular character on the legs?

“The round of actions,” so well described by Mr. B. may, I apprehend, be sufficiently accounted for by the constant interruption which the natural cure of an ulcer experiences by the exertion of the limb in walking; allowing something, however, for a long and daily repetition of these exertions, which, at length, bring the parts into a state far different from that in which they were when the ulcer commenced.

It is this state which requires the application of medicinal remedies, but most of all, *rest*; and it appears to me, that, without going out of our way to investigate the diseased habits of an ulcerated part, we may account for the success of Mr. B.'s method, by considering it as *the means of rest to those parts which most essentially require it*, whilst it leaves at liberty those which rather promote than retard the cure by being exercised.

When the skin is drawn in, and, as it were, *pursed* up, from the circumference towards the centre, and this posture no less secured by slips of plaster than by an external bandage which prevents their giving way, its relaxed state must be preserved, in spite of the exertions of the limb in progressive motion; and I am disposed to attribute to this simple circumstance, rather than to the more elaborate principles described by Mr. B. the beneficial consequences which, undoubtedly, have resulted, in many instances, from his plan of treatment.

Who will say, however, that medicinal applications, corresponding to the particular aspect of the several parts of an ulcer, are not material? I confess I think they are, and that, as well as in

those instances where the slips of plaster *alone* are insufficient, they will, in many others, prove a very important auxiliary; and I am also fully satisfied, without any disparagement to Mr. B.'s discovery, to which I readily allow all the merit it deserves, that the use of the dry powders, recommended by Mr. Home, and of a nine-tailed bandage, already hinted at in Mr. Sandford's letter, are methods worthy of adoption; at least, where the mechanical traction of the skin towards the centre of the ulcer happens to be inadequate, or slow in producing the desired effect.

As a subject of this importance cannot be too strictly investigated, I shall not fail to pay farther attention to it; and shall most willingly, if future experience lead me to embrace the whole of Mr. B.'s opinions, retract any thing I have ventured to urge in opposition to them.

THE END.
